

FOR RENEWABLE ENERGY SOURCE ELIGIBILITY
Pursuant to New Hampshire Admin. Code Puc 2500 Rules

Pursuant to Puc 202, the signed application shall be filed with the Executive Director and Secretary of the New Hampshire Public Utilities Commission (Commission). To ensure that your submitted application is complete, please read RSA 362-F and N.H. Code Admin. Rules Puc 2500 before filling out this application. It is the burden of the applicant to provide timely, accurate and complete information as part of the application process. Any failure by the applicant to provide information in a timely manner may result in the Commission dismissing this application without prejudice.

- Page 1 of 4

(2)

Goffstown

(City)

NH

(State)

03045

(Zip code)

9. Latitude: 43° 01' 00" Longitude: 71° 33' 04"

10. The name and telephone number of the facility's operator, if different from the owner: Same ☒

(Name)

(Telephone number)

11. The ISO-New England asset identification number, if applicable: 866 or N/A: ☐

12. The GIS facility code, if applicable: or N/A: ☒

13. A description of the facility, including fuel type, gross nameplate generation capacity, the initial commercial operation date, and the date it began operation, if different.

14. If Class I certification is sought for a generation facility that uses biomass, the applicant shall submit:
- (a) quarterly average NOx emission rates over the past rolling year,
 - (b) the most recent average particulate matter emission rates as required by the New Hampshire Department of Environmental Services (NHDES),
 - (c) a description of the pollution control equipment or proposed practices for compliance with such requirements,
 - (d) proof that a copy of the completed application has been filed with the NHDES, and
 - (e) conduct a stack test to verify compliance with the emission standard for particulate matter no later than 12 months prior to the end of the subject calendar quarter except as provided for in RSA 362-F:12, II.
 - (f) ☐ N/A: Class I certification is NOT being sought for a generation facility that uses biomass.

15. If Class I certification is sought for the incremental new production of electricity by a generation facility that uses biomass, methane or hydroelectric technologies to produce energy, the applicant shall:
- (a) demonstrate that it has made capital investments after January 1, 2006 with the successful purpose of improving the efficiency or increasing the output of renewable energy from the facility, and
 - (b) supply the historical generation baseline as defined in RSA 362-F:2, X.
 - (c) ☐ N/A: Class I certification is NOT being sought for the incremental new production of electricity by a generation facility that uses biomass, methane or hydroelectric technologies.

16. If Class I certification is sought for repowered Class III or Class IV sources, the applicant shall:
- (a) demonstrate that it has made new capital investments for the purpose of restoring unusable generation capacity or adding to the existing capacity, in light of the NHDES environmental permitting requirements or otherwise, and

- (b) provide documentation that eighty percent of its tax basis in the resulting plant and equipment of the eligible generation capacity, including the NHDES permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.
 - (c) ☐ N/A: Class I certification is NOT being sought for repowered Class III or Class IV sources.
- 17. If Class I certification is sought for formerly nonrenewable energy electric generation facilities, the applicant shall:
 - (a) demonstrate that it has made new capital investments for the purpose of repowering with eligible biomass technologies or methane gas and complies with the certification requirements of Puc 2505.04, if using biomass fuels, and
 - (b) provide documentation that eighty percent of its tax basis in the resulting generation unit, including NHDES permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.
 - (c) ☐ N/A: Class I certification is NOT being sought for formerly nonrenewable energy electric generation facilities.
- 18. If Class IV certification is sought for an existing small hydroelectric facility, the applicant shall submit proof that:
 - (a) it has installed upstream and downstream diadromous fish passages that have been required and approved under the terms of its license or exemption from the Federal Energy Regulatory Commission, and
 - (b) when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects.
 - (c) ☐ N/A: Class I certification is NOT being sought for existing small hydroelectric facilities.
- 19. If the source is located in a control area adjacent to the New England control area, the applicant shall submit proof that the energy is delivered within the New England control area and such delivery is verified using the documentation required in Puc 2504.01(a)(2) a. to e.
- 20. All other necessary regulatory approvals, including any reviews, approvals or permits required by the NHDES or the environmental protection agency in the facility's state.
- 21. Proof that the applicant either has an approved interconnection study on file with the commission, is a party to a currently effective interconnection agreement, or is otherwise not required to undertake an interconnection study.
- 22. A description of how the generation facility is connected to the regional power pool of the local electric distribution utility.
- 23. A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof.
- 24. A statement as to whether the facility's output has been verified by ISO-New England.

25. A description of how the facility's output is reported to the GIS if not verified by ISO-New England.
26. An affidavit by the owner attesting to the accuracy of the contents of the application.
27. Such other information as the applicant wishes to provide to assist in classification of the generating facility.

28. This application and all future correspondence should be sent to:

Ms. Debra A. Howland
Executive Director and Secretary
State of New Hampshire
Public Utilities Commission
21 S. Fruit St, Suite 10
Concord, NH 03301-2429

29. Preparer's information:

Name: Graham Agnew

Title: Manager, Contract Administration and Operations Analysis

Address: (1) Algonquin Power

(2) 2845 Bristol Circle

(3) _____

Oakville

(City)

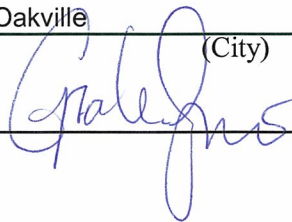
Ontario

(State)

L6H7H7

(Zip code)

30. Preparer's signature: _____

 Feb 6/09

Head Office - Algonquin Power
905-465-4500 – General Line

2845 Bristol Circle, Oakville Ontario, Canada L6H 7H7
905-465-4519 – Graham Agnew direct

All Companies below use the Oakville address as the Owner address

None of these sites below has been certified under **another** non-federal jurisdiction's renewable energy portfolio standard. The attached letter from PSNH verifies this.

Greggs Falls Hydroelectric Partnership (Gregg Falls GS) (SESD#018) (ISO 866)

Location: Goffstown, NH

Market Area: Real Time Hourly LMP 4002 .Z. NEWHAMPSHIRE – LOAD ZONE

Gross Capacity: 3500kW

In Service Date: June 1985

The Gregg Falls facility is located on the Piscataquog River near the Town of Goffstown, New Hampshire. The site was historically used for the generation of electrical energy and was decommissioned in the 1970's. A major refurbishment was undertaken in 1985, which included the installation of two new turbines and generators and the replacement of all electrical and control works. The installed capacity of the facility is 3,500 kilowatts. The site is connected at 3 phase 34.5kV.

The site is currently being paid at the open market rates from the ISO ID and market zone listed above. A small monthly capacity payment is also being paid as laid out in the PURPA regulations.

COMPETITIVELY SENSITIVE INFORMATION WHEN COMPLETED

Affidavit

I, **Graham Agnew**, Hydraulics Team Leader, of full age, being duly sworn according to law, depose and say:

1. I am **Graham Agnew** of Algonquin Power and as such I am fully aware of the facts set forth herein and I am authorized to make this affidavit;
2. Algonquin Power as the Owner/Operator of these sites is mandated to submit an application in the New Hampshire Code of Administrative Rules under the PUC Section 2505.02 Application Requirements (a) and (b);
3. This Affidavit is to verify the accuracy of the contents of this application.

Graham Agnew
Signature

JAN 2, 2009
Date

GRAHAM AGNEW
Name

MANAGER, CONTRACT ADMINISTRATION
Title

HYDRAULICS TEAM LEADER

Notary's Signature

ANNE PATRICIA FRANCIS,
A COMMISSIONER, ETC.,
REGIONAL MUNICIPALITY OF HALTON,
FOR ALGONQUIN POWER INCOME FUND,
EXPIRES JANUARY 14, 2011

Anne P. Francis

COMPETITIVELY SENSITIVE INFORMATION WHEN COMPLETED

Graham Agnew

From: cecchd@nu.com
Sent: August 5, 2008 12:18 PM
To: Graham Agnew
Cc: frasemf@nu.com; vogelcn@nu.com
Subject: RE: ISO-NE GIS or ID numbers

Graham,

All New England projects are listed in the ISO/NEPOOL GIS system. The project owner (Algonquin) has the right to have this account placed in their control otherwise, ISO requires the host utility to be the account holder. You will need to call customer service at ISO-NE on how to proceed. In looking at the facilities on the GIS website, there is no Renewable Energy information entered.

Diane Cecchetti
Analyst
Supplemental Energy Sources
Public Service Co of N.H.
(603) 634-2888
(603) 634-2449 Fax

"Graham Agnew"
<Graham.Agnew@alg
onquinpower.com>

Diane G. Cecchetti/NUS@NU

To

cc

07/28/2008 04:02
PM

Subject

RE: ISO-NE GIS or ID numbers

Hi Diane, yes I am putting together an application package and a part of the requirements for this package is:

"a statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof".

How would you suggest I get this proof?

Regards,

Graham Agnew
Hydraulics Team Leader
Algonquin Power Systems
graham.agnew@algonquinpower.com
905-465-4519
905-465-4514 - fax

-----Original Message-----

From: cecchd@nu.com [mailto:cecchd@nu.com]
Sent: July 28, 2008 3:34 PM
To: Graham Agnew

Subject: RE: ISO-NE GIS or ID numbers

Algonquin would be responsible to register and manage these types of accounts. PSNH would only get involved after registration, therefore I would refer you to www.nepoolgis.com or

GIS Program and System Questions Contact:

GIS Administrator- Bryan Gower

Tel: 408-517-2118

Fax: 408-517-2985

gis@apx.com

OR

24 Hr Help Desk- 1-800-924-9889

Diane Cecchetti
Analyst
Supplemental Energy Sources
Public Service Co of N.H.
(603) 634-2888
(603) 634-2449 Fax

"Graham Agnew"

<Graham.Agnew@algonquinpower.com>

To

Diane G. Cecchetti/NUS@NU

cc

07/28/2008 11:42

AM

Subject

RE: ISO-NE GIS or ID numbers

Hi Diane,

Is there anything that you would be able to provide for me that tells the reader that Algonquin is not currently registered under any other renewable standard portfolio?

Regards,

Graham Agnew
Hydraulics Team Leader
Algonquin Power Systems
graham.agnew@algonquinpower.com
905-465-4519
905-465-4514 - fax
-----Original Message-----
From: cecchd@nu.com [mailto:cecchd@nu.com]
Sent: July 15, 2008 12:55 PM
To: Graham Agnew
Subject: Re: ISO-NE GIS or ID numbers

Hi Graham

The Asset ID's are listed below.

Hope all is well

Diane

	"Graham Agnew"	
	<Graham.Agnew@algonquinpower.com>	
To		Diane G. Cecchetti/NUS@NU
cc	07/15/2008 11:54	
Subject	AM	ISO-NE GIS or ID numbers

Hi Diane, I am applying to the ISI-NE for REC's and I need some information that you may be able to help me with.

Do you have the ISO ID number or GIS number for:

Lakeport	892
Mine Falls	869
Milton	868
River Bend	875
Stevens Mill	885
Greggs Falls	866
Pembroke	870
Lochmere	904

Regards,

Graham Agnew
Hydraulics Team Leader
Algonquin Power Systems
graham.agnew@algonquinpower.com
905-465-4519
905-465-4514 - fax

-----Original Message-----

From: cecchd@nu.com [mailto:cecchd@nu.com]

Sent: January 15, 2008 3:58 PM

To: Andy Ling

Cc: Graham Agnew; Michelle Hunt; vogelcn@nu.com; frasemf@nu.com; martide@nu.com

Subject: Re: Fw: Sale of our NE assets to Ashuelot River Hydro

This e-mail, including any files or attachments transmitted with it, is confidential and intended for a specific purpose and for use only by the individual or entity to whom it is addressed. Any disclosure, copying or distribution of this e-mail or the taking of any action based on its contents, other than for its intended purpose, is strictly prohibited. If you have received this e-mail in error, please notify the sender immediately and delete it from your system. Any views or opinions expressed in this e-mail are not necessarily those of Northeast Utilities, its subsidiaries and affiliates (NU). E-mail transmission cannot be guaranteed to be error-free or secure or free from viruses, and NU disclaims all liability for any resulting damage, errors, or omissions.

SMALL POWER PRODUCER GENERATION

Public Service of New Hampshire
Supplemental Energy Sources Department
PO Box 330
Manchester, NH 03105-0330

Public Service of New Hampshire

Greggs Falls

SESD # **018**
Billing Period: **June 2008**

Gregg Fall Hydro Assoc Limited Partnership
c/o Algonquin Power Fund (America) Inc.
2845 Bristol Circle
Oakville, Ontario, Canada L6H 7H7

Invoice Date 06/16/2008
Expected Payment Date 07/03/2008
PO/Acct # C00003476
Release #
Tel # 905-465-4519
Fax # or Email Doina.Tomescu@algonquinpowe

Delivery Period: 05/10/2008 through 06/09/2008

Total Generation Delivered (Kwhrs) **416,590**

Total Short Term Energy Payment **\$ 39,311.43**

The weighted average hourly price for this invoice equals 9.44 ¢/Kwhr

Seasonal Claimed Capability	EFORD	Monthly Capacity	Rate \$/Kw-mo
3300	0.0462	3148	\$3.05
<p>3300 x (1 - 0.0462) = 3147.54 x 3.05 = \$9,600.00</p>			
Adjustments			\$0.00
Total Payment Due			\$ 48,911.43

The Energy Payment is based upon the attached hourly NH Zone ISO Clearing Prices.

Notes Included in this invoice is the FCM Value for your project in April as credited by ISO-NE

Approved by: _____

Date: _____

JUN 19 2008

Please Approve and Submit this Invoice to:

Danielle Martineau
PSNH, PO Box 330
Manchester, NH 03105-0330

Please contact Diane Cecchetti at PSNH (603-634-2888), FAX (603-634-2449) with questions.

018 Greggs Hydro

GREGGS HYDRO 05/10/08 0000 TO 06/09/08 2400
 SESD #018

Energy Payment

\$39,311.43

Total KW-hrs

416,590

DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080510	1	2010.749	85.73	8.573	172.38
20080510	2	2008.650	106.17	10.617	213.26
20080510	3	1997.099	76.03	7.603	151.84
20080510	4	1961.399	67.54	6.754	132.47
20080510	5	1926.749	59.16	5.916	113.99
20080510	6	1886.849	86.79	8.679	163.76
20080510	7	1843.799	88.33	8.833	162.86
20080510	8	1930.949	103.78	10.378	200.39
20080510	9	1515.150	101.80	10.180	154.24
20080510	10	1434.299	88.10	8.810	126.36
20080510	11	1435.349	130.74	13.074	187.66
20080510	12	1436.399	176.66	17.666	253.75
20080510	13	1440.600	88.46	8.846	127.44
20080510	14	1442.699	88.96	8.896	128.34
20080510	15	1446.899	90.05	9.005	130.29
20080510	16	1450.050	86.74	8.674	125.78
20080510	17	1452.149	87.33	8.733	126.82
20080510	18	1455.299	87.83	8.783	127.82
20080510	19	1458.450	82.39	8.239	120.16
20080510	20	1450.050	84.99	8.499	123.24
20080510	21	1434.299	92.87	9.287	133.20
20080510	22	1433.249	89.24	8.924	127.90
20080510	23	1434.299	83.51	8.351	119.78
20080510	24	1435.349	82.59	8.259	118.55
20080511	1	1437.450	78.04	7.804	112.18
20080511	2	1441.649	71.11	7.111	102.52
20080511	3	1443.749	76.66	7.666	110.68
20080511	4	1444.799	81.28	8.128	117.43
20080511	5	1446.899	85.67	8.567	123.96
20080511	6	1447.950	53.48	5.348	77.44
20080511	7	1450.050	61.30	6.130	88.89
20080511	8	1451.099	45.66	4.566	66.26
20080511	9	1453.199	79.68	7.968	115.79
20080511	10	1453.199	88.46	8.846	128.55
20080511	11	1453.199	96.31	9.631	139.96
20080511	12	1452.149	84.75	8.475	123.07
20080511	13	1453.199	83.59	8.359	121.47
20080511	14	1453.199	78.13	7.813	113.54
20080511	15	1453.199	88.81	8.881	129.06
20080511	16	1454.249	85.39	8.539	124.18
20080511	17	1455.299	66.49	6.649	96.76
20080511	18	1454.249	86.63	8.663	125.98
20080511	19	1452.150	72.88	7.288	105.83
20080511	20	1334.550	90.44	9.044	120.70
20080511	21	921.900	132.98	13.298	122.59
20080511	22	921.899	107.95	10.795	99.52
20080511	23	920.849	84.78	8.478	78.07
20080511	24	922.950	53.97	5.397	49.81
20080512	1	925.050	71.37	7.137	66.02
20080512	2	928.199	78.00	7.800	72.40
20080512	3	931.349	80.65	8.065	75.11
20080512	4	934.499	75.30	7.530	70.37
20080512	5	935.550	59.71	5.971	55.86
20080512	6	937.649	49.91	4.991	46.80

018 Greggs Hydro

DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080512	7	989.099	79.90	7.990	79.03
20080512	8	1251.599	108.42	10.842	135.70
20080512	9	1459.500	109.61	10.961	159.98
20080512	10	1460.550	96.15	9.615	140.43
20080512	11	1431.149	134.71	13.471	192.79
20080512	12	1202.249	108.93	10.893	130.96
20080512	13	1203.299	95.01	9.501	114.33
20080512	14	1203.299	111.53	11.153	134.20
20080512	15	1206.449	97.04	9.704	117.07
20080512	16	1203.299	92.40	9.240	111.18
20080512	17	1200.149	91.02	9.102	109.24
20080512	18	1194.899	93.58	9.358	111.82
20080512	19	1195.950	102.57	10.257	122.67
20080512	20	1195.950	116.56	11.656	139.40
20080512	21	1194.899	135.80	13.580	162.27
20080512	22	1195.950	103.91	10.391	124.27
20080512	23	1194.899	87.19	8.719	104.18
20080512	24	1194.899	82.79	8.279	98.93
20080513	1	1194.899	68.15	6.815	81.43
20080513	2	1194.899	69.87	6.987	83.49
20080513	3	1193.849	86.56	8.656	103.34
20080513	4	1194.899	98.14	9.814	117.27
20080513	5	1193.849	103.69	10.369	123.79
20080513	6	1191.749	67.20	6.720	80.09
20080513	7	1183.350	96.70	9.670	114.43
20080513	8	1175.999	135.32	13.532	159.14
20080513	9	1165.499	107.21	10.721	124.95
20080513	10	1153.949	90.69	9.069	104.65
20080513	11	1142.400	91.94	9.194	105.03
20080513	12	1130.850	97.26	9.726	109.99
20080513	13	1118.250	90.01	9.001	100.65
20080513	14	1101.449	92.74	9.274	102.15
20080513	15	1081.499	96.08	9.608	103.91
20080513	16	1050.000	93.68	9.368	98.36
20080513	17	1003.799	103.14	10.314	103.53
20080513	18	950.249	107.77	10.777	102.41
20080513	19	896.699	93.24	9.324	83.61
20080513	20	849.450	94.17	9.417	79.99
20080513	21	807.450	99.78	9.978	80.57
20080513	22	770.699	105.16	10.516	81.05
20080513	23	752.849	80.12	8.012	60.32
20080513	24	766.500	79.54	7.954	60.97
20080514	1	767.550	77.69	7.769	59.63
20080514	2	768.599	67.65	6.765	52.00
20080514	3	787.499	81.23	8.123	63.97
20080514	4	832.649	87.54	8.754	72.89
20080514	5	878.849	79.89	7.989	70.21
20080514	6	930.300	85.92	8.592	79.93
20080514	7	989.100	122.36	12.236	121.03
20080514	8	1074.149	152.10	15.210	163.38
20080514	9	1224.299	102.55	10.255	125.55
20080514	10	1225.349	107.64	10.764	131.90
20080514	11	1223.249	88.69	8.869	108.49
20080514	12	1224.299	92.77	9.277	113.58
20080514	13	1225.349	99.66	9.966	122.12
20080514	14	1222.199	115.43	11.543	141.08
20080514	15	753.899	111.35	11.135	83.95
20080514	16	718.199	136.25	13.625	97.85
20080514	17	680.399	129.69	12.969	88.24

018 Greggs Hydro

DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080514	18	646.799	102.01	10.201	65.98
20080514	19	624.749	98.29	9.829	61.41
20080514	20	633.149	105.29	10.529	66.66
20080514	21	635.249	141.51	14.151	89.89
20080514	22	635.249	124.30	12.430	78.96
20080514	23	641.549	128.18	12.818	82.23
20080514	24	687.749	92.58	9.258	63.67
20080515	1	747.599	83.12	8.312	62.14
20080515	2	813.749	72.56	7.256	59.05
20080515	3	875.700	93.62	9.362	81.98
20080515	4	935.549	86.57	8.657	80.99
20080515	5	998.549	87.21	8.721	87.08
20080515	6	1056.299	85.77	8.577	90.60
20080515	7	1093.049	82.46	8.246	90.13
20080515	8	1135.050	100.40	10.040	113.96
20080515	9	1225.349	125.87	12.587	154.23
20080515	10	1223.249	118.54	11.854	145.00
20080515	11	1219.050	130.89	13.089	159.56
20080515	12	1218.000	96.33	9.633	117.33
20080515	13	1216.950	95.21	9.521	115.87
20080515	14	1211.699	91.81	9.181	111.25
20080515	15	1201.199	96.57	9.657	116.00
20080515	16	1188.599	112.95	11.295	134.25
20080515	17	1166.549	125.58	12.558	146.50
20080515	18	1137.150	119.66	11.966	136.07
20080515	19	1102.499	106.27	10.627	117.16
20080515	20	1059.449	100.36	10.036	106.33
20080515	21	991.199	150.65	15.065	149.32
20080515	22	916.650	113.33	11.333	103.88
20080515	23	852.599	88.71	8.871	75.63
20080515	24	786.449	74.65	7.465	58.71
20080516	1	720.300	82.10	8.210	59.14
20080516	2	673.050	77.81	7.781	52.37
20080516	3	640.499	65.65	6.565	42.05
20080516	4	642.599	84.65	8.465	54.40
20080516	5	648.900	79.04	7.904	51.29
20080516	6	649.950	73.84	7.384	47.99
20080516	7	654.149	99.34	9.934	64.98
20080516	8	699.299	120.00	12.000	83.92
20080516	9	950.249	128.74	12.874	122.34
20080516	10	1169.699	144.57	14.457	169.10
20080516	11	1166.550	165.56	16.556	193.13
20080516	12	1164.450	131.71	13.171	153.37
20080516	13	1163.399	125.69	12.569	146.23
20080516	14	1162.349	108.09	10.809	125.64
20080516	15	1157.099	97.85	9.785	113.22
20080516	16	1139.250	91.33	9.133	104.05
20080516	17	1120.349	95.22	9.522	106.68
20080516	18	1097.249	92.15	9.215	101.11
20080516	19	935.550	91.37	9.137	85.48
20080516	20	873.599	95.81	9.581	83.70
20080516	21	832.649	97.25	9.725	80.98
20080516	22	787.499	88.28	8.828	69.52
20080516	23	753.899	34.03	3.403	25.66
20080516	24	729.750	77.15	7.715	56.30
20080517	1	740.249	84.18	8.418	62.31
20080517	2	742.349	103.24	10.324	76.64
20080517	3	742.349	84.16	8.416	62.48
20080517	4	743.399	71.90	7.190	53.45

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DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080517	5	744.450	82.32	8.232	61.28
20080517	6	749.700	87.26	8.726	65.42
20080517	7	869.399	63.79	6.379	55.46
20080517	8	1209.599	63.77	6.377	77.14
20080517	9	1205.399	97.87	9.787	117.97
20080517	10	1205.399	109.93	10.993	132.51
20080517	11	1206.450	103.20	10.320	124.51
20080517	12	1199.099	86.50	8.650	103.72
20080517	13	1183.350	118.65	11.865	140.40
20080517	14	1160.249	99.43	9.943	115.36
20080517	15	1126.649	99.72	9.972	112.35
20080517	16	1087.799	109.19	10.919	118.78
20080517	17	1029.000	119.15	11.915	122.61
20080517	18	949.199	121.19	12.119	115.03
20080517	19	869.400	104.71	10.471	91.03
20080517	20	791.699	109.80	10.980	86.93
20080517	21	709.799	148.75	14.875	105.58
20080517	22	643.649	109.58	10.958	70.53
20080517	23	592.199	85.30	8.530	50.51
20080517	24	554.400	84.29	8.429	46.73
20080518	1	553.349	86.52	8.652	47.88
20080518	2	563.849	85.35	8.535	48.12
20080518	3	563.849	84.40	8.440	47.59
20080518	4	566.999	116.20	11.620	65.89
20080518	5	612.149	82.89	8.289	50.74
20080518	6	660.449	81.46	8.146	53.80
20080518	7	720.300	90.40	9.040	65.12
20080518	8	784.350	86.75	8.675	68.04
20080518	9	839.999	122.79	12.279	103.14
20080518	10	1215.900	129.10	12.910	156.97
20080518	11	1212.749	114.89	11.489	139.33
20080518	12	1210.649	128.23	12.823	155.24
20080518	13	1208.550	139.75	13.975	168.89
20080518	14	1200.150	118.58	11.858	142.31
20080518	15	1185.449	113.72	11.372	134.81
20080518	16	1161.299	120.70	12.070	140.17
20080518	17	1123.500	148.74	14.874	167.11
20080518	18	1076.249	204.62	20.462	220.22
20080518	19	994.350	121.45	12.145	120.76
20080518	20	893.549	110.00	11.000	98.29
20080518	21	788.549	130.81	13.081	103.15
20080518	22	666.749	82.75	8.275	55.17
20080518	23	559.649	85.29	8.529	47.73
20080518	24	466.199	84.76	8.476	39.52
20080519	1	391.649	86.92	8.692	34.04
20080519	2	341.249	77.31	7.731	26.38
20080519	3	313.949	70.61	7.061	22.17
20080519	4	318.149	72.41	7.241	23.04
20080519	5	323.399	73.83	7.383	23.88
20080519	6	327.599	52.03	5.203	17.04
20080519	7	370.649	79.22	7.922	29.36
20080519	8	701.400	87.78	8.778	61.57
20080519	9	1149.749	83.98	8.398	96.56
20080519	10	1167.600	93.11	9.311	108.72
20080519	11	1191.749	90.23	9.023	107.53
20080519	12	1180.200	96.01	9.601	113.31
20080519	13	1161.300	92.05	9.205	106.90
20080519	14	1139.249	96.93	9.693	110.43
20080519	15	1107.749	95.14	9.514	105.39

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DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	ϕ (KWH)	ENERGY PAYMENT
20080519	16	973.349	114.49	11.449	111.44
20080519	17	816.900	92.73	9.273	75.75
20080519	18	716.099	89.72	8.972	64.25
20080519	19	615.299	85.67	8.567	52.71
20080519	20	529.200	86.18	8.618	45.61
20080519	21	509.249	88.92	8.892	45.28
20080519	22	512.399	88.04	8.804	45.11
20080519	23	645.749	79.67	7.967	51.45
20080519	24	608.999	74.99	7.499	45.67
20080520	1	556.499	65.89	6.589	36.67
20080520	2	509.249	61.17	6.117	31.15
20080520	3	473.549	80.12	8.012	37.94
20080520	4	463.049	62.14	6.214	28.77
20080520	5	474.599	80.11	8.011	38.02
20080520	6	474.599	82.73	8.273	39.26
20080520	7	564.899	112.99	11.299	63.83
20080520	8	677.249	101.02	10.102	68.42
20080520	9	729.749	103.23	10.323	75.33
20080520	10	1050.000	146.85	14.685	154.19
20080520	11	1048.950	110.38	11.038	115.78
20080520	12	1047.899	104.73	10.473	109.75
20080520	13	1018.500	104.39	10.439	106.32
20080520	14	977.550	116.06	11.606	113.45
20080520	15	926.100	121.29	12.129	112.33
20080520	16	688.800	112.82	11.282	77.71
20080520	17	467.249	138.38	13.838	64.66
20080520	18	402.149	90.65	9.065	36.45
20080520	19	350.699	89.15	8.915	31.26
20080520	20	308.699	92.29	9.229	28.49
20080520	21	276.149	99.16	9.916	27.38
20080520	22	302.399	88.67	8.867	26.81
20080520	23	456.749	100.11	10.011	45.73
20080520	24	456.749	121.36	12.136	55.43
20080521	1	451.500	137.15	13.715	61.92
20080521	2	453.599	82.87	8.287	37.59
20080521	3	452.550	77.49	7.749	35.07
20080521	4	456.749	45.89	4.589	20.96
20080521	5	456.749	80.36	8.036	36.70
20080521	6	456.749	44.80	4.480	20.46
20080521	7	457.799	59.82	5.982	27.39
20080521	8	456.749	88.37	8.837	40.36
20080521	9	456.749	99.48	9.948	45.44
20080521	10	456.749	110.39	11.039	50.42
20080521	11	457.799	106.75	10.675	48.87
20080521	12	456.749	94.04	9.404	42.95
20080521	13	453.599	100.92	10.092	45.78
20080521	14	190.049	104.83	10.483	19.92
20080521	15	200.550	93.32	9.332	18.72
20080521	16	201.599	89.48	8.948	18.04
20080521	17	200.550	90.29	9.029	18.11
20080521	18	213.149	91.34	9.134	19.47
20080521	19	214.199	88.04	8.804	18.86
20080521	20	188.999	87.97	8.797	16.63
20080521	21	179.550	86.86	8.686	15.60
20080521	22	178.500	86.87	8.687	15.51
20080521	23	179.550	80.39	8.039	14.43
20080521	24	180.599	81.05	8.105	14.64
20080522	1	180.599	64.89	6.489	11.72
20080522	2	180.599	39.64	3.964	7.16

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DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080522	3	180.599	83.58	8.358	15.09
20080522	4	181.649	73.68	7.368	13.38
20080522	5	181.649	47.89	4.789	8.70
20080522	6	182.699	52.81	5.281	9.65
20080522	7	182.699	64.69	6.469	11.82
20080522	8	182.699	93.64	9.364	17.11
20080522	9	183.749	90.19	9.019	16.57
20080522	10	183.749	88.59	8.859	16.28
20080522	11	165.899	87.36	8.736	14.49
20080522	12	120.749	83.43	8.343	10.07
20080522	13	0.000	85.68	8.568	0.00
20080522	14	0.000	91.13	9.113	0.00
20080522	15	0.000	99.40	9.940	0.00
20080522	16	0.000	96.20	9.620	0.00
20080522	17	0.000	93.86	9.386	0.00
20080522	18	0.000	90.98	9.098	0.00
20080522	19	0.000	88.82	8.882	0.00
20080522	20	0.000	89.97	8.997	0.00
20080522	21	0.000	92.84	9.284	0.00
20080522	22	0.000	89.84	8.984	0.00
20080522	23	111.300	57.80	5.780	6.43
20080522	24	192.149	69.07	6.907	13.27
20080523	1	194.249	88.65	8.865	17.22
20080523	2	205.799	81.86	8.186	16.85
20080523	3	254.100	72.99	7.299	18.55
20080523	4	304.499	74.76	7.476	22.76
20080523	5	355.949	88.73	8.873	31.58
20080523	6	416.849	74.45	7.445	31.03
20080523	7	568.050	86.89	8.689	49.36
20080523	8	805.349	101.72	10.172	81.92
20080523	9	788.549	101.95	10.195	80.39
20080523	10	727.650	101.57	10.157	73.91
20080523	11	707.699	101.30	10.130	71.69
20080523	12	703.500	94.87	9.487	66.74
20080523	13	700.349	91.41	9.141	64.02
20080523	14	654.149	97.02	9.702	63.47
20080523	15	564.900	100.62	10.062	56.84
20080523	16	558.600	95.63	9.563	53.42
20080523	17	549.150	92.14	9.214	50.60
20080523	18	535.499	89.32	8.932	47.83
20080523	19	522.900	82.64	8.264	43.21
20080523	20	505.050	66.73	6.673	33.70
20080523	21	495.600	88.02	8.802	43.62
20080523	22	487.199	86.25	8.625	42.02
20080523	23	484.050	66.40	6.640	32.14
20080523	24	483.000	74.86	7.486	36.16
20080524	1	484.050	61.75	6.175	29.89
20080524	2	483.000	48.70	4.870	23.52
20080524	3	483.000	65.47	6.547	31.62
20080524	4	481.950	69.85	6.985	33.66
20080524	5	480.899	2.16	0.216	1.04
20080524	6	480.899	0.00	0.000	0.00
20080524	7	478.799	0.00	0.000	0.00
20080524	8	478.799	56.40	5.640	27.00
20080524	9	466.199	86.44	8.644	40.30
20080524	10	461.999	87.30	8.730	40.33
20080524	11	448.350	37.98	3.798	17.03
20080524	12	441.000	83.33	8.333	36.75
20080524	13	435.749	75.32	7.532	32.82

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DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080524	14	432.599	54.86	5.486	23.73
20080524	15	430.500	58.75	5.875	25.29
20080524	16	428.399	79.87	7.987	34.22
20080524	17	424.199	58.80	5.880	24.94
20080524	18	425.249	84.11	8.411	35.77
20080524	19	425.249	45.95	4.595	19.54
20080524	20	426.299	50.53	5.053	21.54
20080524	21	426.299	89.38	8.938	38.10
20080524	22	426.299	87.34	8.734	37.23
20080524	23	425.249	55.92	5.592	23.78
20080524	24	426.299	59.69	5.969	25.45
20080525	1	427.349	64.24	6.424	27.45
20080525	2	427.349	66.69	6.669	28.50
20080525	3	428.399	28.29	2.829	12.12
20080525	4	427.349	24.72	2.472	10.56
20080525	5	428.399	43.28	4.328	18.54
20080525	6	428.399	56.46	5.646	24.19
20080525	7	428.399	3.05	0.305	1.31
20080525	8	429.450	0.00	0.000	0.00
20080525	9	429.450	0.00	0.000	0.00
20080525	10	428.399	23.15	2.315	9.92
20080525	11	428.399	83.08	8.308	35.59
20080525	12	428.399	75.95	7.595	32.54
20080525	13	428.399	77.20	7.720	33.07
20080525	14	427.349	79.60	7.960	34.02
20080525	15	427.349	52.20	5.220	22.31
20080525	16	427.349	84.35	8.435	36.05
20080525	17	426.299	49.52	4.952	21.11
20080525	18	427.349	38.00	3.800	16.24
20080525	19	426.299	70.72	7.072	30.15
20080525	20	426.299	49.80	4.980	21.23
20080525	21	426.299	69.40	6.940	29.59
20080525	22	427.349	51.43	5.143	21.98
20080525	23	425.249	83.34	8.334	35.44
20080525	24	427.349	74.73	7.473	31.94
20080526	1	426.299	25.79	2.579	10.99
20080526	2	425.249	1.69	0.169	0.72
20080526	3	426.299	0.00	0.000	0.00
20080526	4	426.299	0.00	0.000	0.00
20080526	5	426.299	0.00	0.000	0.00
20080526	6	425.249	65.51	6.551	27.86
20080526	7	423.149	64.02	6.402	27.09
20080526	8	425.249	41.88	4.188	17.81
20080526	9	424.199	27.65	2.765	11.73
20080526	10	422.099	89.25	8.925	37.67
20080526	11	421.050	88.78	8.878	37.38
20080526	12	414.749	85.23	8.523	35.35
20080526	13	411.600	83.93	8.393	34.55
20080526	14	402.150	88.49	8.849	35.59
20080526	15	395.850	94.01	9.401	37.21
20080526	16	389.550	92.12	9.212	35.89
20080526	17	382.199	93.45	9.345	35.72
20080526	18	376.950	94.65	9.465	35.68
20080526	19	373.799	93.81	9.381	35.07
20080526	20	373.799	90.96	9.096	34.00
20080526	21	370.649	106.15	10.615	39.34
20080526	22	369.599	88.42	8.842	32.68
20080526	23	369.599	77.16	7.716	28.52
20080526	24	372.749	50.35	5.035	18.77

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DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080527	1	371.699	88.58	8.858	32.93
20080527	2	371.699	84.06	8.406	31.25
20080527	3	372.749	78.05	7.805	29.09
20080527	4	372.749	61.55	6.155	22.94
20080527	5	373.799	72.58	7.258	27.13
20080527	6	373.799	66.73	6.673	24.94
20080527	7	373.799	58.42	5.842	21.84
20080527	8	373.799	99.93	9.993	37.35
20080527	9	370.649	145.49	14.549	53.93
20080527	10	359.100	178.98	17.898	64.27
20080527	11	340.199	330.28	33.028	112.36
20080527	12	329.699	351.91	35.191	116.02
20080527	13	331.799	203.09	20.309	67.39
20080527	14	447.299	222.54	22.254	99.54
20080527	15	459.900	169.04	16.904	77.74
20080527	16	421.050	112.70	11.270	47.45
20080527	17	385.349	175.77	17.577	67.73
20080527	18	345.450	171.07	17.107	59.10
20080527	19	306.599	186.06	18.606	57.05
20080527	20	266.699	119.59	11.959	31.89
20080527	21	236.249	149.06	14.906	35.22
20080527	22	203.700	112.07	11.207	22.83
20080527	23	181.649	89.84	8.984	16.32
20080527	24	193.200	69.74	6.974	13.47
20080528	1	198.450	95.38	9.538	18.93
20080528	2	199.500	86.66	8.666	17.29
20080528	3	199.500	78.60	7.860	15.68
20080528	4	199.500	84.04	8.404	16.77
20080528	5	200.550	136.51	13.651	27.38
20080528	6	200.550	87.10	8.710	17.47
20080528	7	200.550	79.92	7.992	16.03
20080528	8	256.200	93.97	9.397	24.08
20080528	9	280.350	93.86	9.386	26.31
20080528	10	81.900	93.52	9.352	7.66
20080528	11	339.149	91.99	9.199	31.20
20080528	12	340.199	92.47	9.247	31.46
20080528	13	356.999	94.19	9.419	33.63
20080528	14	455.700	97.27	9.727	44.33
20080528	15	504.000	95.10	9.510	47.93
20080528	16	577.499	99.24	9.924	57.31
20080528	17	576.449	103.19	10.319	59.48
20080528	18	538.649	113.82	11.382	61.31
20080528	19	489.300	91.01	9.101	44.53
20080528	20	403.200	92.71	9.271	37.38
20080528	21	246.749	119.18	11.918	29.41
20080528	22	205.800	99.86	9.986	20.55
20080528	23	195.299	88.18	8.818	17.22
20080528	24	196.349	101.50	10.150	19.93
20080529	1	197.399	82.88	8.288	16.36
20080529	2	195.299	77.82	7.782	15.20
20080529	3	197.399	77.59	7.759	15.32
20080529	4	196.349	91.31	9.131	17.93
20080529	5	195.299	87.47	8.747	17.08
20080529	6	206.850	76.53	7.653	15.83
20080529	7	210.000	82.77	8.277	17.38
20080529	8	211.050	86.99	8.699	18.36
20080529	9	211.050	90.94	9.094	19.19
20080529	10	247.800	92.80	9.280	23.00
20080529	11	381.150	122.83	12.283	46.82

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DATE	HOUR	TOTAL KWH	ISO CLEARING	¢(KWH)	ENERGY
		SOLD	PRICE \$(MWH)		PAYMENT
20080529	12	347.549	104.22	10.422	36.22
20080529	13	312.900	121.97	12.197	38.16
20080529	14	276.149	117.48	11.748	32.44
20080529	15	244.649	136.84	13.684	33.48
20080529	16	191.100	136.42	13.642	26.07
20080529	17	155.399	124.69	12.469	19.38
20080529	18	144.899	117.20	11.720	16.98
20080529	19	145.950	92.21	9.221	13.46
20080529	20	140.699	113.37	11.337	15.95
20080529	21	140.699	192.83	19.283	27.13
20080529	22	140.699	145.97	14.597	20.54
20080529	23	139.649	84.70	8.470	11.83
20080529	24	150.150	78.40	7.840	11.77
20080530	1	161.699	76.13	7.613	12.31
20080530	2	161.699	53.36	5.336	8.63
20080530	3	161.699	106.04	10.604	17.15
20080530	4	162.749	94.10	9.410	15.31
20080530	5	161.699	94.26	9.426	15.24
20080530	6	162.749	63.13	6.313	10.27
20080530	7	193.199	56.91	5.691	10.99
20080530	8	266.699	87.40	8.740	23.31
20080530	9	266.699	112.43	11.243	29.98
20080530	10	267.749	136.03	13.603	36.42
20080530	11	250.950	122.67	12.267	30.78
20080530	12	219.449	105.98	10.598	23.26
20080530	13	194.249	93.01	9.301	18.07
20080530	14	193.199	90.39	9.039	17.46
20080530	15	194.249	112.89	11.289	21.93
20080530	16	193.199	105.95	10.595	20.47
20080530	17	194.249	122.93	12.293	23.88
20080530	18	196.349	119.18	11.918	23.40
20080530	19	196.349	95.73	9.573	18.80
20080530	20	194.249	90.54	9.054	17.59
20080530	21	190.050	112.24	11.224	21.33
20080530	22	190.050	101.79	10.179	19.35
20080530	23	190.050	125.36	12.536	23.82
20080530	24	189.000	140.81	14.081	26.61
20080531	1	190.050	84.97	8.497	16.15
20080531	2	190.050	62.54	6.254	11.89
20080531	3	191.099	78.40	7.840	14.98
20080531	4	190.050	50.36	5.036	9.57
20080531	5	191.099	88.75	8.875	16.96
20080531	6	191.099	84.12	8.412	16.08
20080531	7	190.050	46.40	4.640	8.82
20080531	8	180.600	54.16	5.416	9.78
20080531	9	158.549	102.93	10.293	16.32
20080531	10	162.749	130.13	13.013	21.18
20080531	11	163.799	120.67	12.067	19.77
20080531	12	163.799	109.12	10.912	17.87
20080531	13	153.299	113.93	11.393	17.47
20080531	14	153.299	111.66	11.166	17.12
20080531	15	160.650	113.81	11.381	18.28
20080531	16	157.500	119.82	11.982	18.87
20080531	17	157.499	127.56	12.756	20.09
20080531	18	171.149	123.68	12.368	21.17
20080531	19	169.050	112.25	11.225	18.98
20080531	20	162.749	117.19	11.719	19.07
20080531	21	166.950	136.40	13.640	22.77
20080531	22	171.149	104.70	10.470	17.92

018 Greggs Hydro

DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080531	23	171.149	96.68	9.668	16.55
20080531	24	168.000	97.40	9.740	16.36
20080601	1	173.249	97.98	9.798	16.97
20080601	2	176.399	130.95	13.095	23.10
20080601	3	177.450	172.68	17.268	30.64
20080601	4	178.500	100.99	10.099	18.03
20080601	5	178.500	110.54	11.054	19.73
20080601	6	179.550	33.51	3.351	6.02
20080601	7	195.300	99.18	9.918	19.37
20080601	8	265.649	85.77	8.577	22.78
20080601	9	253.049	80.78	8.078	20.44
20080601	10	227.849	90.21	9.021	20.55
20080601	11	207.899	101.53	10.153	21.11
20080601	12	188.999	139.21	13.921	26.31
20080601	13	171.149	122.88	12.288	21.03
20080601	14	221.550	125.24	12.524	27.75
20080601	15	333.900	114.99	11.499	38.40
20080601	16	294.000	104.25	10.425	30.65
20080601	17	246.749	155.42	15.542	38.35
20080601	18	197.399	132.67	13.267	26.19
20080601	19	178.499	97.23	9.723	17.36
20080601	20	180.599	75.14	7.514	13.57
20080601	21	177.449	121.20	12.120	21.51
20080601	22	180.599	125.57	12.557	22.68
20080601	23	179.550	126.63	12.663	22.74
20080601	24	180.599	73.13	7.313	13.21
20080602	1	181.649	98.12	9.812	17.82
20080602	2	180.599	85.73	8.573	15.48
20080602	3	179.550	79.63	7.963	14.30
20080602	4	180.599	65.65	6.565	11.86
20080602	5	180.599	77.40	7.740	13.98
20080602	6	180.599	77.63	7.763	14.02
20080602	7	181.649	78.62	7.862	14.28
20080602	8	152.249	79.71	7.971	12.14
20080602	9	138.599	94.64	9.464	13.12
20080602	10	141.749	96.12	9.612	13.62
20080602	11	145.950	91.65	9.165	13.38
20080602	12	148.050	98.44	9.844	14.57
20080602	13	142.799	99.53	9.953	14.21
20080602	14	143.849	105.67	10.567	15.20
20080602	15	142.799	135.74	13.574	19.38
20080602	16	141.749	119.23	11.923	16.90
20080602	17	143.849	126.68	12.668	18.22
20080602	18	154.350	107.58	10.758	16.60
20080602	19	164.849	91.24	9.124	15.04
20080602	20	165.900	88.43	8.843	14.67
20080602	21	170.099	94.50	9.450	16.07
20080602	22	182.699	105.30	10.530	19.24
20080602	23	211.050	80.00	8.000	16.88
20080602	24	211.050	76.80	7.680	16.21
20080603	1	211.050	30.02	3.002	6.34
20080603	2	212.099	18.38	1.838	3.90
20080603	3	211.050	22.58	2.258	4.77
20080603	4	211.050	26.19	2.619	5.53
20080603	5	211.050	32.16	3.216	6.79
20080603	6	212.099	84.60	8.460	17.94
20080603	7	213.149	65.83	6.583	14.03
20080603	8	213.150	88.93	8.893	18.96
20080603	9	229.950	89.39	8.939	20.56

018 Greggs Hydro

DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080603	10	229.950	91.56	9.156	21.05
20080603	11	228.899	98.34	9.834	22.51
20080603	12	222.600	95.27	9.527	21.21
20080603	13	207.900	91.17	9.117	18.95
20080603	14	196.350	93.94	9.394	18.45
20080603	15	182.699	92.95	9.295	16.98
20080603	16	187.950	91.38	9.138	17.17
20080603	17	192.149	89.31	8.931	17.16
20080603	18	193.199	94.37	9.437	18.23
20080603	19	204.749	98.79	9.879	20.23
20080603	20	199.499	89.93	8.993	17.94
20080603	21	201.599	93.31	9.331	18.81
20080603	22	201.599	88.22	8.822	17.79
20080603	23	196.349	51.61	5.161	10.13
20080603	24	194.249	78.68	7.868	15.28
20080604	1	190.049	118.02	11.802	22.43
20080604	2	194.249	83.05	8.305	16.13
20080604	3	192.149	82.29	8.229	15.81
20080604	4	191.099	42.66	4.266	8.15
20080604	5	195.299	127.59	12.759	24.92
20080604	6	195.299	97.82	9.782	19.10
20080604	7	194.249	77.14	7.714	14.98
20080604	8	196.349	111.81	11.181	21.95
20080604	9	196.349	116.64	11.664	22.90
20080604	10	196.349	111.98	11.198	21.99
20080604	11	195.299	116.14	11.614	22.68
20080604	12	196.349	134.56	13.456	26.42
20080604	13	196.349	112.14	11.214	22.02
20080604	14	197.399	108.99	10.899	21.51
20080604	15	196.349	119.66	11.966	23.50
20080604	16	196.349	115.21	11.521	22.62
20080604	17	197.399	118.72	11.872	23.44
20080604	18	197.399	101.48	10.148	20.03
20080604	19	198.450	98.05	9.805	19.46
20080604	20	314.999	94.98	9.498	29.92
20080604	21	341.249	98.40	9.840	33.58
20080604	22	340.199	91.57	9.157	31.15
20080604	23	308.699	48.96	4.896	15.11
20080604	24	276.150	70.60	7.060	19.50
20080605	1	244.650	102.20	10.220	25.00
20080605	2	212.099	103.18	10.318	21.88
20080605	3	192.149	100.36	10.036	19.28
20080605	4	193.199	68.57	6.857	13.25
20080605	5	192.149	94.34	9.434	18.13
20080605	6	201.599	127.17	12.717	25.64
20080605	7	212.100	79.78	7.978	16.92
20080605	8	211.050	94.40	9.440	19.92
20080605	9	213.149	113.65	11.365	24.22
20080605	10	214.199	124.62	12.462	26.69
20080605	11	214.199	154.97	15.497	33.19
20080605	12	215.249	125.70	12.570	27.06
20080605	13	249.900	110.99	11.099	27.74
20080605	14	285.599	131.71	13.171	37.62
20080605	15	286.649	142.22	14.222	40.77
20080605	16	286.649	136.12	13.612	39.02
20080605	17	286.649	150.45	15.045	43.13
20080605	18	287.699	150.33	15.033	43.25
20080605	19	286.649	139.25	13.925	39.92
20080605	20	286.649	154.09	15.409	44.17

018 Greggs Hydro

DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	¢(KWH)	ENERGY PAYMENT
20080605	21	278.249	161.73	16.173	45.00
20080605	22	268.799	147.16	14.716	39.56
20080605	23	266.699	92.36	9.236	24.63
20080605	24	266.699	148.21	14.821	39.53
20080606	1	267.749	87.00	8.700	23.29
20080606	2	266.699	67.61	6.761	18.03
20080606	3	265.649	84.79	8.479	22.52
20080606	4	267.749	56.71	5.671	15.18
20080606	5	268.799	42.64	4.264	11.46
20080606	6	268.799	51.79	5.179	13.92
20080606	7	419.999	96.59	9.659	40.57
20080606	8	466.200	93.83	9.383	43.74
20080606	9	430.500	96.78	9.678	41.66
20080606	10	401.099	102.90	10.290	41.27
20080606	11	367.499	116.90	11.690	42.96
20080606	12	334.949	103.91	10.391	34.80
20080606	13	305.549	97.24	9.724	29.71
20080606	14	299.249	91.22	9.122	27.30
20080606	15	401.100	89.50	8.950	35.90
20080606	16	400.049	90.44	9.044	36.18
20080606	17	372.749	92.21	9.221	34.37
20080606	18	359.099	83.27	8.327	29.90
20080606	19	384.300	49.30	4.930	18.95
20080606	20	466.199	59.56	5.956	27.77
20080606	21	466.199	86.07	8.607	40.13
20080606	22	465.149	54.53	5.453	25.36
20080606	23	521.850	23.20	2.320	12.11
20080606	24	560.699	34.12	3.412	19.13
20080607	1	530.249	19.86	1.986	10.53
20080607	2	518.699	2.88	0.288	1.49
20080607	3	523.950	0.00	0.000	0.00
20080607	4	525.000	0.00	0.000	0.00
20080607	5	526.050	0.00	0.000	0.00
20080607	6	536.550	0.00	0.000	0.00
20080607	7	633.149	0.00	0.000	0.00
20080607	8	799.049	0.00	0.000	0.00
20080607	9	758.100	33.47	3.347	25.37
20080607	10	647.849	26.57	2.657	17.21
20080607	11	551.249	45.25	4.525	24.94
20080607	12	506.099	44.37	4.437	22.46
20080607	13	463.050	47.78	4.778	22.12
20080607	14	429.449	70.11	7.011	30.11
20080607	15	436.800	57.60	5.760	25.16
20080607	16	464.100	87.27	8.727	40.50
20080607	17	468.299	66.15	6.615	30.98
20080607	18	466.199	63.44	6.344	29.58
20080607	19	464.099	86.52	8.652	40.15
20080607	20	467.249	92.78	9.278	43.35
20080607	21	486.149	94.58	9.458	45.98
20080607	22	542.849	95.31	9.531	51.74
20080607	23	543.899	94.01	9.401	51.13
20080607	24	543.899	92.20	9.220	50.15
20080608	1	544.950	97.13	9.713	52.93
20080608	2	543.899	89.70	8.970	48.79
20080608	3	538.650	30.22	3.022	16.28
20080608	4	498.749	45.17	4.517	22.53
20080608	5	469.349	23.84	2.384	11.19
20080608	6	446.249	0.00	0.000	0.00
20080608	7	436.799	0.00	0.000	0.00

018 Greggs Hydro

DATE	HOUR	TOTAL KWH SOLD	ISO CLEARING PRICE \$(MWH)	ϕ (KWH)	ENERGY PAYMENT
20080608	8	437.849	0.00	0.000	0.00
20080608	9	439.950	95.28	9.528	41.92
20080608	10	437.849	122.06	12.206	53.44
20080608	11	435.749	167.13	16.713	72.83
20080608	12	435.749	181.98	18.198	79.30
20080608	13	431.550	170.49	17.049	73.57
20080608	14	432.599	117.39	11.739	50.78
20080608	15	428.400	170.30	17.030	72.96
20080608	16	425.249	178.21	17.821	75.78
20080608	17	485.100	133.05	13.305	64.54
20080608	18	503.999	126.39	12.639	63.70
20080608	19	471.449	194.44	19.444	91.67
20080608	20	438.900	236.90	23.690	103.98
20080608	21	408.449	181.95	18.195	74.32
20080608	22	377.999	169.67	16.967	64.14
20080608	23	348.599	104.82	10.482	36.54
20080608	24	323.399	99.89	9.989	32.30
20080609	1	314.999	104.44	10.444	32.90
20080609	2	323.399	92.31	9.231	29.85
20080609	3	323.399	74.48	7.448	24.09
20080609	4	324.450	45.90	4.590	14.89
20080609	5	324.450	74.59	7.459	24.20
20080609	6	325.500	40.41	4.041	13.15
20080609	7	325.500	95.76	9.576	31.17
20080609	8	326.550	132.34	13.234	43.22
20080609	9	325.500	143.44	14.344	46.69
20080609	10	325.500	149.73	14.973	48.74
20080609	11	326.550	185.21	18.521	60.48
20080609	12	401.099	177.25	17.725	71.09
20080609	13	447.299	175.65	17.565	78.57
20080609	14	448.349	186.57	18.657	83.65
20080609	15	448.349	198.10	19.810	88.82
20080609	16	477.749	264.77	26.477	126.49
20080609	17	484.050	353.85	35.385	171.28
20080609	18	455.699	200.01	20.001	91.14
20080609	19	422.099	190.84	19.084	80.55
20080609	20	388.499	182.39	18.239	70.86
20080609	21	352.799	175.35	17.535	61.86
20080609	22	320.249	135.36	13.536	43.35
20080609	23	290.850	98.95	9.895	28.78
20080609	24	263.549	138.27	13.827	36.44
		Total KWHrs			Energy Payment
		416590.133			\$39,311.43



2845 Bristol Circle,
Oakville, Ontario, L6H 7H7
Tel 905-465-4500; Fax 905-465-4500

Via E-mail

Date: June 19, 2008 File: 602.7.3

From: Doina Tomescu
Algonquin Power Systems Inc.
Tel: (905) 465-4532 Fax: (905) 465-4514

To: Danielle Martineau
Public Service of New Hampshire
Fax: (603) 634-2449

Re: **GREGGS FALLS G.S. (PSNH #018)**

Total Pages: (2)

Dear Danielle:

Please find enclosed the approved invoice for the period of May 10, 2008 through Jun 9, 2008 for the above mentioned generating station. The original will be forwarded by mail to your attention.

Should you have any questions/concerns regarding the above, please contact the undersigned at (905) 465-4532, at your earliest convenience.

Best regards,
Doina Tomescu

Average ISO rates for New Hampshire

\$0.09428

	Site	Batch #2	Rate as per our Estimate	Estimated Capacity \$	Amount to be received as per estimation	PSNH Statement Reading	Rate Paid on Statement	Actual Capacity \$	Revenue
601	Clement								
602	Gregg's	396,000	\$0.06100	\$9,600.00	\$33,756.00	416,590	\$0.09440	\$9,600.00	\$48,911.43
604	Pembroke	450,800	\$0.06100	\$7,563.63	\$35,062.43	474,009	\$0.09350	\$7,563.63	\$51,876.86
605	River Bend								
606	Stevens Mill								
608	Milton	357,000	\$0.06100	\$4,392.73	\$26,169.73	370,004	\$0.09350	\$4,392.73	\$39,001.34
609	Mine Falls								
705	Lakeport	177,800	\$0.06100	\$2,094.54	\$12,940.34	187,062	\$0.09450	\$2,094.54	\$19,764.78
706	Lochmere								

Jun PSNH Inv.

CLEM	\$ 6,981.82
GREG	\$ 9,600.00
PEMB	\$ 7,563.63
RIVE	\$ 5,207.27
STEV	\$ 654.55
MILT	\$ 4,392.73
MINE	\$ 8,727.27
LAKE	\$ 2,094.54
LOCH	\$ 2,981.82

April
2008 Capacity

Doina Tomescu

From: Doina Tomescu
Sent: June 19, 2008 1:14 PM
To: 'martide@nu.com'
Subject: Greggs invoice - Jun 2008
Attachments: Greggs invoice.pdf

Attachment 1
Interconnection Agreement
Gregg Falls Hydroelectric Associates-PSNH
Dated July 27, 1984

PSNH INTERCONNECTION REPORT FOR
CUSTOMER GENERATION

GREGG FALLS

SESD SITE NO. 018

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I. INTRODUCTION

A study has been performed to determine the impact of this proposed facility on the PSNH system. All technical analysis was based on the equipment listed under Section II, and the facility arrangement illustrated on partial one-line diagram SK-PAM-018-0. Where actual site-specific data was not readily available, estimated or "typical" values were utilized in any required calculations. Any deviation from the listed equipment or the illustrated configuration may have significant safety and/or technical ramifications. Consequently, if changes are anticipated now or in the future, PSNH should be informed immediately so that the requirements and recommendations contained within the report may be revised where necessary. This procedure will ensure that the Developer is informed of PSNH requirements in a timely fashion and should eliminate the delays and expense which could otherwise be experienced by the Developer.

II. DESCRIPTION OF MAJOR COMPONENTS

A. Description Of Facilities

Greggs Falls is a two-machine 3.5 MW hydroelectric facility located in Goffstown, N.H. The site utilizes water taken from the Piscataquog River and impounded behind Greggs Falls Dam (NHWRB No. 93.01). All generation will be delivered to PSNH 34.5 kV line 328. Station service power will be taken from 12.47 kV line 27W2.

The salient electrical features of this facility are illustrated on Partial One-Line Diagram SK-PAM-018-0, section VII.A of this report.

B. Mechanical Components

1. Turbines:

- No. 1 - Sorumsand, vertical Francis, 2195 KW, 277 RPM
- No. 2 - Sorumsand, vertical Francis, 1400 KW, 360 RPM

2. Actuators:

- No. 1 - Sorumsand, Hydraulic
- No. 2 - Sorumsand, Hydraulic

C. Electrical Components

To the degree that the information is available and applicable, information in this section should include the following:

1. Generators:

- G1 - National Industri, synchronous, 276.9 RPM, 4160 V, .9 PF, 2.41 MVA, $X''_d = .241$, $X'_d = .241$, $X_d = .85$

II.C.1 (Cont'd)

G2 - National Industri, synchronous, 360 RPM, 4160 V, .9 PF,
1.46 MVA, $X''_d = .286$, $X'_d = .29$, $X_d = .91$

2. Exciter/voltage regulators:

G1 - Basler SSE
G2 - Basler SSE

3. Generator Circuit Breakers - Brown Boveri type 5HK250 air circuit breakers, 5 kV class, 1200 amp, 250 MVA IC.
4. Generator Stepup Transformer - 3.75 MVA, 34.5 kV - 4.16 kV, 6% impedance, reactance grounded wye-delta, 200 kV BIL
5. Neutral Grounding Reactor - 36 OHMS, reactance at 60 Hz, 10 amps continuous rating, 250 Amps 10 second rating
6. High Side Interrupter - McGraw Edison VSO recloser, 3-phase, 560 A, 12000 A IC, Electronic control

III. PSNH REQUIREMENTS - GENERAL

A. Safety Considerations

1. The connection of the facility to the PSNH system must not compromise the safety of PSNH's customers, personnel, or the owner's personnel.
2. The generating facility must not have the capability of energizing a de-energized PSNH circuit.
3. An emergency shutdown switch with facility status indicator lights, and a disconnecting device with a visible open shall be made available for unrestricted use by PSNH personnel. The operation of the switch shall cause all of the facility's generation to be removed from service, and shall block all automatic startup of generation until the switch is reset. The status lights, mounted with the shutdown switch, shall be located outdoors at a position acceptable to PSNH operating division personnel. A red light shall indicate that the facility has generation connected to the PSNH system. A green light shall indicate that all generation is disconnected from the PSNH system. The lights shall be driven directly from auxiliary switches located on the facility's 34.5 kV interrupting device (52L). The disconnecting device with visible open shall be located between the PSNH system and the facility's generation.
4. The settings for all protective relays required by PSNH will be developed by PSNH.

5. A crew of PSNH relay technicians will apply settings to and verify the proper functioning of those protective systems required by PSNH. This work will be performed at the Developer's expense.
6. The generating facility has full responsibility for ensuring that the protective system and the associated devices are maintained in reliable operating condition. PSNH reserves the right to inspect and test all protective equipment at the interconnecting point whenever it is considered necessary. This inspection may include tripping of the breakers.
7. The short circuit interrupting device(s) must have sufficient interrupting capacity for all faults that might exist. The PSNH system impedance at the facility will be supplied on request.
8. All shunt-tripped short circuit interrupting devices applied to generators must be equipped with reliable power sources. A D.C. battery with associated charging facilities is considered a reliable source.
9. All synchronous generator facilities must be equipped with battery-tripped circuit breakers.
10. Any protection scheme utilizing AC control power must be designed in a fail-safe mode. That is, all protective components must utilize contacts which are closed during normal operating conditions, but which open during abnormal conditions or when control power is lost to de-energize the generator contactor coil. These schemes may be utilized only with non-latching contactors and may not be used with synchronous generators.
11. A complete set of AC and DC elementary diagrams showing the implementation of all systems required by PSNH must be supplied for PSNH review. These drawings should be supplied as soon as possible so that any non-conforming items may be corrected by the Developer without impacting the scheduled completion date of the facility.
12. All voltage transformers driving PSNH-required protection systems must be rated by the manufacturer as to accuracy class, and must be capable of driving their connected burdens with an error not exceeding 1.2 percent.
13. All current transformers driving PSNH-required protection systems must be rated by the manufacturer as to accuracy class and must be capable of driving their connected burdens with an error not exceeding 10 percent.
14. All PSNH-required protective relays, and any other relays which PSNH will be requested to test, must be equipped with test facilities which allow secondary quantity injection and output contact isolation.

15. It is not the policy of PSNH to maintain a stock of protective relays for resale to facility developers. Since many protective devices have delivery times of several months, Developers are strongly advised to order them as soon as possible after PSNH type-approval is received.
16. Protection of the generating facility equipment for problems and/or disturbances which might occur internal or external to the facility is the responsibility of the Developer.
17. No operation of the facility's generation is allowed until all requirements in Sections III and IV of this report have been met, and all systems required therein, are in place, calibrated, and, if applicable, proven functional. This requirement may be waived by PSNH for a given system if generation is required to demonstrate the proper functioning of that system.

B. Service Quality Considerations

1. The connection of the facility to the PSNH system must not reduce the quality of service currently existing on the PSNH system. Voltage fluctuations, flicker, and excessive voltage and current harmonic content are among the service quality considerations. Harmonic limitations should conform to the latest IEEE guidelines and/or ANSI standards.
2. In general, induction generators must be accelerated to "synchronous" speed prior to connection to the PSNH system to reduce the magnitude and duration of accelerating current and resulting voltage drop to PSNH customers to acceptable levels.
3. In general, synchronous generators may not use the "pull-in" method of synchronizing due to excessive voltage drops to PSNH customers.
4. Power factor correction capacitors may be required for some facilities either at the time of initial installation, or, at some later date. The installation will normally be done by the Developer at his expense.
5. Certain facilities having installed capacity similar in magnitude to connected circuit load may require that control modifications be made to tap changers in the electrical vicinity. Should they be necessary, the modification will be made at the Developers' expense.
6. Automatic reclosing of the PSNH circuit after a tripping operation may occur after an appropriate time delay. If voltage blocking of automatic reclosing is required, it will be added at the Developers' expense.

C. Metering Considerations

1. Except for metering and protection/control voltage sensing and generator and/or capacitor contactor supply voltage, no unmetered AC power shall be taken from the PSNH system.

D. System Operation

1. The maximum voltage allowed by the New Hampshire Public Utilities Commission (NHPUC) on those lines which directly feed retail customers is 104%. The generators must be operated at excitation levels which do not violate that limit.
2. Any generator trips resulting from protective relay operations should be promptly reported to the PSNH load dispatcher. The data reported should include time of operation, device designation, target nomenclature, approximate watts and vars at the time of the trip, and any other information pertinent to the operation.
3. Any alarms or malfunctions of the PSNH-required protective systems must be promptly reported to the PSNH load dispatcher.

IV. PSNH REQUIREMENTS - SPECIFIC

A. System Configuration and Protection

1. The facility must be arranged and equipped as per partial one line diagram SK-PAM-018-0.
2. The following protective functions must be supplied and connected to automatically trip as indicated. These devices must be utility grade as approved by PSNH.

<u>Protective Device</u>	<u>Minimum Tripping Function</u>
1. Time-Overfrequency (81F)	52G1, 52G2
2. Time-Underfrequency (81L)	52G1, 52G2
3. Time-Overvoltage (59)	52G1, 52G2
4. Time-Undervoltage (27)	52G1, 52G2
5. Ground Time-Overcurrent (51N)	52L
6. Voltage Restrained Time-Overcurrent (51V)	Associated 52G
7. Reverse Power (32)	Associated 52G

3. The facility generator stepup transformer (GSU) must have a reactance grounded wye (HV) - Delta (LV) winding configuration.

4. The facility must be equipped with a PSNH-approved fully rated high-side three phase interrupting device capable of interrupting all fault currents supplied either by PSNH or the facility itself. The device must be equipped with trip components and accessories as specified and/or approved by PSNH.
5. The GSU must be equipped with a 34.5 kV neutral grounding reactor with the following specifications:
 - 60 Hz Reactance - 36 OERMS
 - Continuous Rating - 10 Amps
 - 10 Second Rating - 250 Amps.
6. The facility must be equipped with three disconnecting links on the line side of the 52L device to act as a visible open point between the facility and the PSNH system.
7. Synchronism check permissive must be added at Greggs S/S on OCB TBL7.
8. The opening of Device 52L must always cause the opening of Devices 52G1 and 52G2.

B. System Metering

1. The facility must be equipped with the metering system as shown on partial one line diagram SK-PAM-018-0.
2. The metering must consist of the following components:
 - a. 2 - G.E. Type JKM-3, 600/5 amp. current transformers
 - b. 2 - G.E. Type JVM-3, 4200/120 volt voltage transformers with 2 line side fuses
 - c. 1 - SC type JEM-2 multifunction solid state time-of-day meter with transformer loss compensation option
 - d. 1 - Anchor Cat. #TSS-13-2-PSHO meter socket
 - e. 1 - Meter Devices Cat. #A1898-C, 10 pole test switch

Optional Equipment:

- f. 1 - Mass memory and extended communications option for Item C., above
- g. 1 - Teleprinter

- Notes:
1. There is a 10-14 week delivery lead time required for the metering equipment.
 2. Secondary metered at 4160 volts.
 3. The meter will be compensated for transformer losses (GSU) by use of an integral transformer loss compensation routine.

4. Developer must provide a means to accomplish the following:

- a. Report on a daily basis, twenty-four hours of hourly generation. Values are to be reported in tenths of a MWh. Hourly generation is the gross or net value as agreed upon in the contract. The NEPUC also requires hourly generation reports, but on a monthly basis.

Optional items f and g, above, will allow a printed record of hourly generation to be produced and will allow the generation report requirements to be fulfilled. The option is left to the Developer to implement, however, as he may have other means to comply with this requirement.

- b. Report a meter reading on a weekly basis to correct any discrepancies in the hourly totals.
- c. Provide on a monthly basis, a printed log of date, time and hourly generation for each day of the month. Metering required for watthour records will be either magnetic tape or electronic recorders as specified by the New England Power Pool (NEPOOL).

PSNH will install at its expense a pulse recorder for generation to satisfy NEPOOL requirements. If the standard pulse output of the JEM-2 is not being used by the Developer, PSNH will use this output. If the Developer is using the pulse output, PSNH will provide an isolation relay that will allow simultaneous non-interfering usage of the pulse output.

- d. The Station Operator is to report expected output for the following day, outage and return times, and significant limitations to the PSNH Dispatcher.
 - e. The dates planned for annual inspection along with any flexibility in the planned period should be available to PSNH in accordance with NEPEX Operating Procedure #5.
 - f. Using monthly meter readings, submit a calculated bill for generation supplied to PSNH.
5. Developer to physically mount the metering equipment and install necessary conduit.
 6. PSNH to wire meter secondaries and to perform tests.

C. Primary Interconnection

The following work must be performed to interface this facility with the PSNH system.

1. The final tap between PSNH line 328 and the solid cutouts on the PSNH side of the VSO recloser must be completed.
2. The VSO recloser and associated accessories must be functionally checked. It should be noted that the recloser and associated hardware will be supplied and installed by others.
3. The VSO recloser (device 52L) will be maintained by PSNH at the Developer's expense on a bi-yearly schedule.

V. PSNH PRICE ESTIMATES

The following estimates for labor, materials, and overheads are supplied as an aid to the Developer for financial planning purposes. Should the Developer elect to have PSNH perform any of the work described in the estimates, he will ultimately be billed for the full actual cost of any work performed.

Authorization for PSNH to perform any of the work or supply any of the equipment described below must be forwarded to the Supplemental Energy Sources Department along with a minimum payment covering 50% of the estimated labor and materials cost. PSNH will neither perform work nor order materials until this requirement has been met.

A. System Protection

1. Greggs Hydro

a. Materials

\$ 0.00

PSNH is supplying no system protection equipment.

b. Labor, Overheads, and Misc.

\$4,400.00

Applying settings to and verifying the correct operation of the protection and control equipment required by PSNH. Apply settings to and verify the correct operation of 40(2), 46(2), 64G(2), 87(3), and 64B devices included by Developer but not required by PSNH.

2. Greggs S/S (PSNH)

a. Materials

\$1,100.00

1 - synchronism check relay (25)

b. Labor, Overheads, and Misc. \$2,300.00

Engineering, drafting installation and testing of component listed above. See report section IV.A.7 for application information.

SUBTOTAL \$7,800.00

B. System Metering

1. Materials \$ 0.00

PSNH is supplying no metering materials

2. Labor, overheads, misc. \$ 500.00

Wire metering secondaries and perform tests

SUBTOTAL \$ 500.00

C. Primary Interconnection

1. Materials, Labor, Overheads, Misc. \$2,000.00

Engineering, installation, testing, and materials associated with the work described in report Section IV.C

2. The BI-Annual maintenance on device 52L will be performed by PSNH at an estimated labor cost and outage duration of \$800 and 2 days, respectively. The cost of any necessary replacement parts will be in addition to this figure and will also be the responsibility of the Developer. Maintenance costs are not included in this section.

SUBTOTAL \$2,000.00

GRAND TOTAL (A + B + C) \$10,300.00

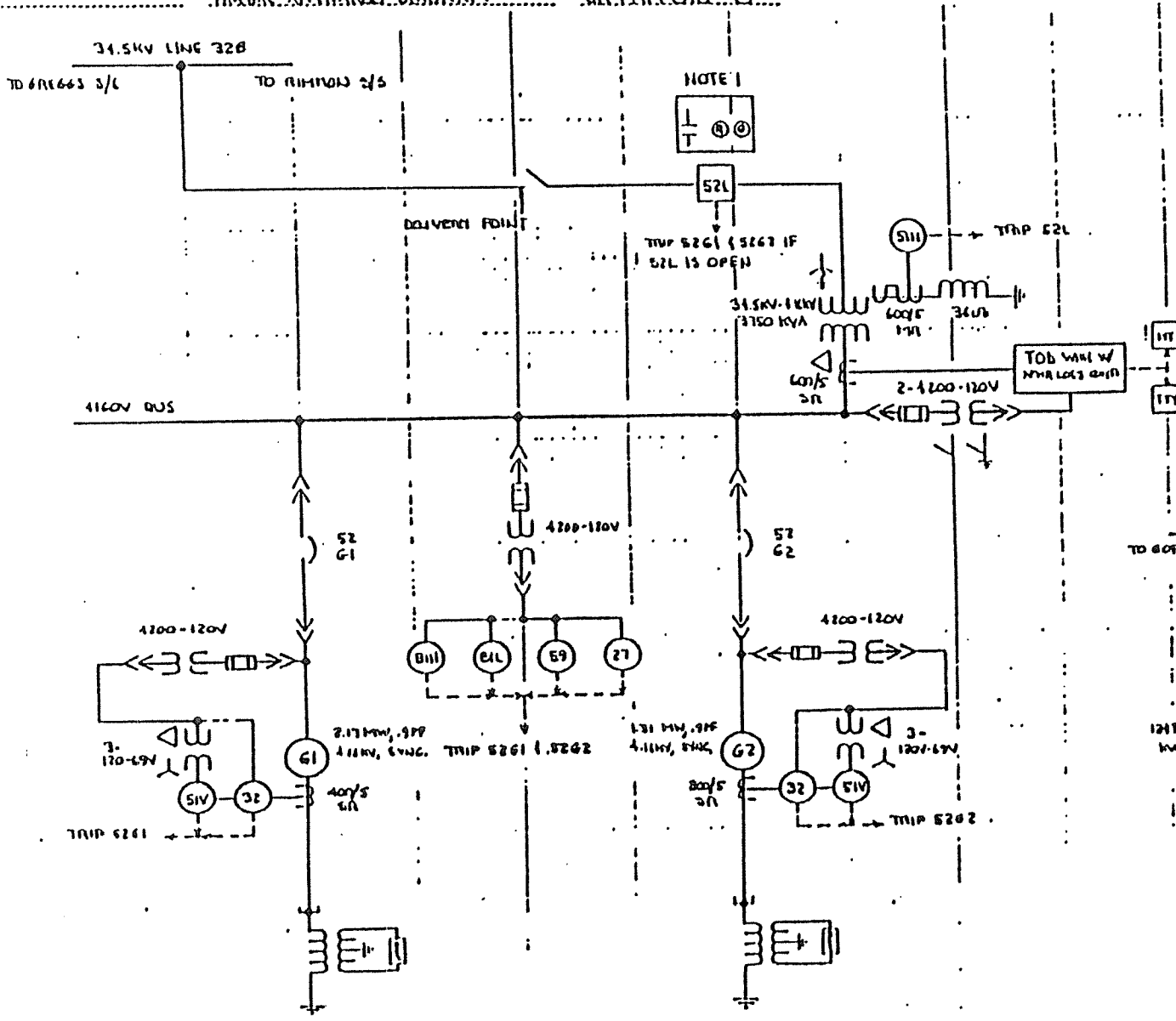
VI. INTERCONNECTION EQUIPMENT OWNERSHIP, OPERATION, AND MAINTENANCE

A. Delivery Point

For the purpose of establishing ownership, operation, and maintenance responsibilities, the location of facility energy delivery to PSNH (the "Delivery Point") must be defined. At this facility, the delivery point is located at the PSNH side of the isolating cutouts located on the PSNH side of device 52L.

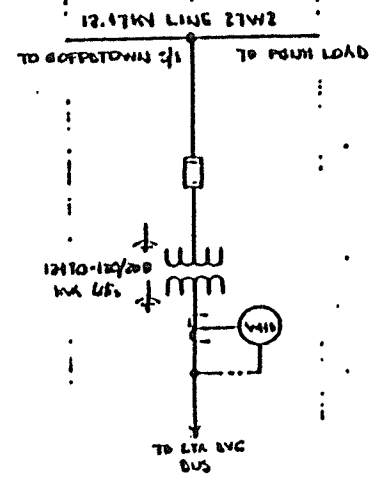
B. Description of Responsibilities

The Developer will normally be responsible for the ownership, maintenance, and operation of all equipment on the facility side of the delivery point. However, special circumstances may require PSNH personnel to operate the emergency shutdown switch and visible opening device. This would likely occur only during situations where facility personnel were not available or during planned maintenance of device 52L.



- ### NOTES

 - 52L CONTROL SWITCH AND EXTERNALLY MOUNTED AUXILIARY SWITCH POSITION INDICATING LIGHTS WILL SERVE AS THE EMERGENCY SHUTDOWN STATION AND FACILITY STATUS LIGHTS
 - SYNC PROVISIONS AND OTHER DETAILS NOT SHOWN
 - THE PROTECTIVE DEVICES AND TRIPPING ALIGNMENTS ARE THE MINIMUM REQUIREMENTS OF PENN. ADDITIONAL DEVICES AND TRIPPING MAY BE INCLUDED BY THE DEVELOPER.



INTERCONNECTIONS REJECT SECTION VII.A.

ATTACHMENT B

Greggs Falls Price Schedule

1. Contractual Capacity Value: 1.4 MW (Subject to audit and adjustment under Contract Article 4)
2. Rate Structure for the Period 1/93 - 12/20

	CAPACITY	ENERGY (c/Kwh)				
Billing Period	Annual Capacity Rate (\$/KW-Yr)	Block1	Block 2	Block 3	Block 4	Block5
		Up to 8,075 Annual MWH	8,076-9,025 Annual MWH	9,026-9975 Annual MWH	9976-10,925 Annual MWH	Above 10,926 Annual MWH
1/93-12/95	86.7	11.4	10.0	8.6	7.1	5.7
1/96-12/11	86.7	SEE	BELOW	FOR	ESCALA	TION
1/12-12/16	0	100% of PSNH then-current Energy & Capacity Avoided Cost				
1/17-12/20	0	90% of PSNH then-current Energy & Capacity Avoided Cost				

Beginning in January 1996, through December 2011, the energy rates shall be adjusted annually in the January billing period. In January 1996, the energy rates in each energy block in the base year (1993) shall be increased by 2.25%. In each subsequent January through January 2011, the energy rates shall be determined by increasing the energy rates for each energy block in the base year (1993) by the greater of (1) cumulative escalation at 2.25% per annum since January 1, 1996 or (2) the cumulative increase of 50% of annual GNP deflator referenced to January 1, 1996 (see attached "Escalation Provision - Example").

Energy rates apply to all on-peak and off-peak hours of production. Energy payments up to 8075 annual MWH are guaranteed as long as facility is available for power production. "Available for power production" means that if adequate water is available to operate the facility consistent with regulatory requirements, normal operating practice and equipment suppliers' recommendations, the facility is generating power. If the facility is not operated during periods of adequate water availability in excess of 336 hours in an annual billing cycle (January through December), the guaranteed minimum payment, if applicable, will be reduced according to the following formula:

$$RP = \frac{D-N}{D} \times GP$$

Where: GP = Guaranteed Minimum Payment=8075 MWH x Energy Rate
for Block 1 in effect for that billing cycle
RP = Revised Guaranteed Payment
D = Number of hours in annual billing cycle
N = Number of hours the facility is not operated
during periods of adequate water availability over
the course of the annual billing cycle in excess
of 336 hours

Provided, that in the event that the Revised Guaranteed Payment is equal to or less than 7 1/2% of the Guaranteed Minimum Payment, it shall be deemed to equal zero.

As part of any request by Seller for a Guaranteed Minimum Payment or Revised Guaranteed Payment, Seller shall provide all data and information (including, but not limited to, available U.S. Geological Survey water level data) reasonably necessary to confirm such a request. Consistent with Article 3 of this Contract, Seller will use its best efforts to maximize its output from the facility, subject to available river flows and governmental regulation.

3. Debt Service Adjustments

If Seller can demonstrate that the sum of energy payments and capacity payments are insufficient to cover debt service requirements, PSNH will adjust pricing terms so that debt requirements are met provided best efforts are made by Seller to restructure the debt in order to eliminate the need for supplemental payments.

4. Right to Cancel

In the event that the project's production costs plus a profit allowance of 16% of production costs for any given year exceeds revenues PSNH's avoided costs during the period 01/12 through 12/16 or 90% of PSNH's avoided costs during the period 01/17 through 12/20, the Seller shall have the right to cancel the power purchase contract without penalty; provided however that PSNH may, in its sole discretion, elect to pay the Seller 116% of production costs and continue to purchase the project's power. PSNH shall have the right to review and audit the project's expenses if Seller elects to cancel the power purchase contract or if PSNH elects to continue to purchase the power.

The Seller's production costs shall include all operating costs including (but not limited to) contract management fees, administrative costs, lease payments, real estate taxes or PILOT payments, insurance and debt service (principal and interest) related

to capital additions required for operations or ordered by regulatory or other agencies of government, but shall exclude debt service related to the Seller's original capitalization.

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Year	1	2	3	4	5	6	7	8	9	10
A	Annual Increase by WPI Deflator	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
B	WPI Increase	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
C	Cost Increase in Column B	1.50%	1.02%	4.57%	7.20%	11.47%	16.49%	18.24%	20.01%	21.81%
D	Cost Increase in Column B	0.00%	2.21%	4.51%	8.50%	11.77%	14.28%	16.87%	19.48%	22.17%
E	Cost Increase in Column B	—	2.25%	4.55%	8.50%	11.77%	14.28%	16.87%	19.48%	22.17%
F	KWII Rate	11.20	11.45	11.71	11.97	12.24	12.52	12.80	13.08	13.36

The KWII Rate for each year is determined by multiplying the KWII Rate (Column F) in the base year (11.2 in the example) by the greater of the cumulative increase in electricity rates (Column D) or the cumulative increase in the annual WPI deflator (Column C).

For example: In Year 3, the cumulative increase in electricity rates of Column D is 7.70% (Column C) and the cumulative increase in electricity rates of Column D is 2.21% (Column D). The KWII Rate in the base year (11.2) is then multiplied by 1 + the greater of Column C or D in Year 3 (9.31%) to determine the KWII Rate in Year 3 (12.24).

INTERCONNECTION AGREEMENT

AGREEMENT, dated July 27, 1984, by and between GREGG FALLS HYDROELECTRIC ASSOCIATES, a New Hampshire Partnership with its principal office in Concord, New Hampshire (hereinafter referred to as INTERCONNECTOR), and PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire corporation having its principal place of business in Manchester, New Hampshire (hereinafter referred to as PUBLIC SERVICE).

WHEREAS, INTERCONNECTOR desires to interconnect their Gregg's Falls hydroelectric generating facility, located in Goffstown, New Hampshire, on the Piscataquog River, with the electric system of PUBLIC SERVICE in accordance with applicable New Hampshire Public Utilities Commission (hereinafter referred to as NHPUC) Orders; and

WHEREAS, the NHPUC requires that a written interconnection agreement be executed between the parties; and

WHEREAS, it is necessary that certain agreements be made prior to interconnection and the commencement of sales of electricity to insure the safety, reliability and integrity of PUBLIC SERVICE's electric system, and to establish a mechanism of payment of the rate established by the NHPUC, the parties hereby agree as follows:

Article 1. Interconnection and Voltage Characteristics.

The interconnection point shall be that point at which INTERCONNECTOR's generating facility interconnects with the 34.5 KV electric system of PUBLIC SERVICE.

Unless PUBLIC SERVICE converts its interconnection circuit, all electric energy interconnected with PUBLIC SERVICE's system shall be 34.5 KV, three-phase, sixty hertz.

Article 2. Metering.

The metering shall be configured so as to represent the generation delivered to PUBLIC SERVICE. The metering may be installed on the generation side of the transformer provided that transformer losses are subtracted from the measured generation by a suitable method.

INTERCONNECTOR will install, own, and maintain all metering equipment

as referenced in Article 4, to measure the flow of electrical energy from INTERCONNECTOR to PUBLIC SERVICE. If at any time, the meter is found to be in error by more than two percent fast or slow (+ or - 2%), INTERCONNECTOR shall cause such meter to be corrected and the meter readings for the period of inaccuracy shall be adjusted to correct such inaccuracy so far as the same can be reasonably ascertained, but no adjustment prior to the beginning of the preceding month shall be made except by agreement of the parties. All tests and calibrations shall be made in accordance with Section V-14 of the NHPUC Rules and Regulations Prescribing Standards for Electric Utilities in effect as of September 8, 1972, as amended. The meter shall be tested as prescribed in said Rules and Regulations.

In addition to the regular routine tests, INTERCONNECTOR shall cause the meter to be tested at any time upon request of and in the presence of a representative of PUBLIC SERVICE. If such equipment proves accurate within two percent fast or slow (+ or - 2%), the expense of the test shall be borne by PUBLIC SERVICE.

PUBLIC SERVICE reserves the right to secure or seal the metering installation, to require INTERCONNECTOR to measure electrical energy sold to PUBLIC SERVICE on an hour-by-hour basis, and to require INTERCONNECTOR to notify PUBLIC SERVICE once each day of INTERCONNECTOR's generation in kilowatthours for each hour during the prior 24 hours.

Article 3. Billing and Payment.

PUBLIC SERVICE shall read the meter on or about the end of each month and shall promptly send INTERCONNECTOR a form showing the month's beginning and ending meter readings and net kwh generation. INTERCONNECTOR shall then transmit to PUBLIC SERVICE a bill showing the amount due for the sale of energy to PUBLIC SERVICE, which amount shall be determined by multiplying the number of kWh's of energy delivered to PUBLIC SERVICE since the prior reading of the meter times the energy rate per kwh (or times the appropriate time-of-day rates, as applicable) set forth in INTERCONNECTOR's rate filing approved by the NHPUC and is, or will be when available, attached hereto as Attachment A.

INTERCONNECTOR shall also include on said bill the appropriate

capacity payment, if any, to be made by PUBLIC SERVICE, as approved by the NHPUC. PUBLIC SERVICE will send to INTERCONNECTOR a payment for that amount within 20 days of receipt of INTERCONNECTOR's bill. The foregoing is intended to provide a procedure for the payment of rates established by the NHPUC, and shall not be construed as creating a separate contractual obligation on the part of PUBLIC SERVICE to pay the rate(s) approved by the NHPUC.

INTERCONNECTOR understands that any capacity payments are contingent upon an audit of the generating facility performed by the NHPUC and that Interconnector must request the NHPUC to perform said audit.

Article 4. Interconnection & Protection Requirements.

The INTERCONNECTOR shall install all interconnection, protection, metering, and control equipment as specified in PUBLIC SERVICE's study of the INTERCONNECTOR's electric generating facility, which study is, or will be upon mutual consent of both parties, attached hereto as Attachment B and any other such equipment which may be necessary to ensure the safe and reliable operation of INTERCONNECTOR's generating unit in parallel with PUBLIC SERVICE's system. INTERCONNECTOR shall bear all costs associated with said equipment and its installation, including those costs associated with PUBLIC SERVICE's study of the INTERCONNECTOR's electric generating facility. Prior to the aforementioned study, one half of PUBLIC SERVICE's estimated costs of the study shall be paid to PUBLIC SERVICE prior to beginning the study. The balance, based on actual costs incurred, shall be due upon completion of the study.

Up to the interconnection point, all said interconnection, protection, metering, and control equipment including, but not limited to, line extensions, transformers, meters, relays, breakers, and appurtenant equipment shall remain the sole property of INTERCONNECTOR.

INTERCONNECTOR shall have sole responsibility for the operation, maintenance, and repair of its generating unit, including the interconnection, protection, metering, and control equipment. INTERCONNECTOR shall maintain, repair, or replace said generating unit including said equipment whenever necessary for the safe and reliable operation of INTERCONNECTOR's electric facility in parallel with PUBLIC SERVICE's system.

In addition to the above, upon the effective date of this Agreement,

and every twelve months thereafter, the INTERCONNECTOR shall test, or cause to be tested, all protection devices including verification of calibration and tripping functions; and the INTERCONNECTOR shall notify PUBLIC SERVICE in writing that said tests have been conducted. INTERCONNECTOR shall notify PUBLIC SERVICE of any defect affecting the safety or reliability of said equipment not later than two hours after its discovery of the same.

If either party reasonably determines that the operation or use of any portion of the protection system, as required in this Article, will or may not perform its protective function, including but not limited to opening the interconnecting tie, INTERCONNECTOR shall open the interconnection between PUBLIC SERVICE's system and INTERCONNECTOR's facility. INTERCONNECTOR shall notify PUBLIC SERVICE not more than two days after it has opened said interconnection. PUBLIC SERVICE shall not be obligated to receive electrical energy from INTERCONNECTOR and the interconnection shall remain open, until INTERCONNECTOR has satisfactorily cured said defect at no cost to PUBLIC SERVICE.

Article 5. Right of Access.

Upon prior written or oral notice to INTERCONNECTOR, PUBLIC SERVICE shall have the right to enter the property of INTERCONNECTOR at reasonable times and shall be provided access to INTERCONNECTOR's metering, protection, control, and interconnection equipment.

Article 6. Modification of Facility.

If INTERCONNECTOR plans any modifications to its electric facility, INTERCONNECTOR shall give PUBLIC SERVICE prior written notice of its intentions. In the event that PUBLIC SERVICE reasonably determines that said modifications would necessitate changes to the interconnection, protection, control, or metering equipment or would cause PUBLIC SERVICE to incur additional expenses associated therewith, the INTERCONNECTOR shall make such changes as reasonably required by PUBLIC SERVICE and reimburse PUBLIC SERVICE for said expenses before PUBLIC SERVICE is obligated to purchase any increased output.

If the PUBLIC SERVICE interconnecting circuit is converted to a higher voltage in the future, the INTERCONNECTOR shall be responsible for all intercon-

nection changes necessitated by the conversion and shall bear all costs associated with said conversion.

Article 7. Liability & Insurance.

- a. Each party will be responsible for its facilities and the operation thereof and will indemnify and save the other harmless from any and all loss by reason of property damage, bodily injury, including death resulting therefrom suffered by any person or persons including the parties hereto, employees thereof or members of the public, (and all expenses in connection therewith, including attorney's fees) whether arising in agreement, warranty, tort (including negligence), strict liability or otherwise, caused by or sustained on, or alleged to be caused by or sustained on, equipment or facilities, or the operation or use thereof, owned or controlled by such party, except that each party shall be solely responsible for and shall bear all costs of claims by its own employees or contractors growing out of any workmen's compensation law.
- b. INTERCONNECTOR hereby agrees to maintain in force and effect, for the duration of this Agreement, Workmen's Compensation Insurance, as required by statute, and Comprehensive General Liability Insurance for bodily injury and property damage at minimum limits of three million dollars (\$3,000,000). At least sixty days prior to the actual, physical interconnection of the facility, the INTERCONNECTOR agrees to provide PUBLIC SERVICE with a certificate of insurance evidencing such coverage.
- c. In no event shall INTERCONNECTOR or PUBLIC SERVICE be liable, whether in agreement, tort (including negligence), strict liability, warranty, or otherwise, for any special, indirect, incidental, or consequential loss or damage, including but not limited to cost of capital, cost of replacement power, loss of profits or revenues or the loss of the use thereof. This provision, Article 7, subsection c, shall apply notwithstanding any other provision of this Agreement.

Article 8. Force Majeure.

Either party shall not be considered to be in default hereunder and shall be excused from interchanging electricity hereunder if and to the extent that it shall be prevented from doing so by storm, flood, lightning, earthquake, explosion, equipment failure, civil disturbance, labor dispute, act of God or the public enemy, action of a court or public authority, withdrawal of facilities from operation for necessary maintenance and repair, or any cause beyond the reasonable control of either party.

Article 9. Termination.

PUBLIC SERVICE may not terminate this Agreement during such time as its obligations as set forth in the Limited Electrical Energy Producers Act or Public Utility Regulatory Policies Act remains unchanged and in force, except that PUBLIC SERVICE may terminate this Agreement should INTERCONNECTOR fail to substantially perform in accordance with the terms of this Agreement.

The INTERCONNECTOR may terminate this Interconnection Agreement in accordance with the provisions established by the New Hampshire Public Utilities Commission in their applicable orders.

After termination, both parties shall be discharged from all further obligation under the term of this Agreement, excepting any liability which may have been incurred before the date of such termination.

Article 10. Modification of Agreement.

In order for any modification to this Agreement to be binding upon the parties, said modification must be in writing and signed by both parties.

Article 11. Prior Agreements Superseded.

This Agreement with Attachments A and B represents the entire agreement between the parties hereto relating to the subject matter hereof, and all previous agreements, discussion, communications, and correspondence with respect to the said subject matter are superseded by the execution of this Agreement.

Article 12. Waiver of Terms or Conditions.

The failure of either party to enforce or insist upon compliance with any of the terms or conditions of this Agreement shall not constitute a general waiver or relinquishment of any such terms or conditions, but the same shall be and remain at all times in full force and effect.

Article 13. General.

This Agreement shall be binding upon, and inure to the benefit of the respective successors and assigns of the parties hereto, provided that INTERCONNECTOR shall not assign this Agreement except to an affiliated company, without the prior written consent of PUBLIC SERVICE, which consent shall not be unreasonably withheld. The term "affiliated company" shall include any partnership in which INTERCONNECTOR or one of INTERCONNECTOR's subsidiaries, affiliates, principals, or owners is a general partner or any corporation in which INTERCONNECTOR or one of its subsidiaries, affiliates, principals, or owners owns or controls more than 50 percent of the voting stock or otherwise has operating control. In the event of an assignment to an affiliate, INTERCONNECTOR shall notify PUBLIC SERVICE within five (5) days of the effective date of the assignment.

Article 14. Applicable Law.

This Agreement is made under the laws of The State of New Hampshire and the interpretation and performance hereof shall be in accordance with and controlled by the laws of that State.

Article 15. Mailing Addresses.

The mailing addresses of the parties are as follows:

INTERCONNECTOR: Gregg Falls Hydroelectric Associates
c/o Mill Pond Hydro Corporation
77 Franklin Street
Boston, MA 02110
Attn: Robert L. Winship, Vice President

PUBLIC SERVICE: Public Service Company of New Hampshire
1000 Elm Street
P.O. Box 330
Manchester, New Hampshire 03105
Attn: Roy G. Barbour, Vice President

Article 16. Effective Date.

This Agreement shall become effective between the parties as of the effective date of the Commission order approving the long term rate, although PUBLIC SERVICE shall not be obligated to make any payments to INTERCONNECTOR, as referred to in Article 3, until INTERCONNECTOR has satisfactorily installed all metering, interconnection and protective equipment as specified in Attachment B.

IN WITNESS WHEREOF, the parties each by its duly authorized representatives have hereunto caused their names to be subscribed, as of the day and year first above written.

GREGG FALLS HYDROELECTRIC ASSOCIATES
By MILL POND HYDRO CORPORATION (as
General Partner)

Robert L. Winship
(Witness)

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ATTACHMENT A

Interconnection Agreement
Gregg Falls Hydroelectric Associates - PSNH
Dated: July 27, 1984

<u>YEAR</u>	<u>ENERGY RATE (¢/KWH)</u>		<u>CAPACITY RATE</u>
	<u>ON-PEAK</u>	<u>OFF-PEAK</u>	<u>\$/KW-YR.</u>
1986	13.39	10.00	86.60
1987	13.39	10.00	86.60
1988	13.39	10.00	86.60
1989	15.59	11.63	100.79
1990	15.59	11.63	100.79
1991	15.59	11.63	100.79
1992	15.59	11.63	100.79
1993	15.59	11.63	100.79
1994	15.59	11.63	100.79
1995	15.59	11.63	100.79
1996	15.59	11.63	100.79
1997	15.59	11.63	100.79
1998	15.59	11.63	100.79
1999	15.59	11.63	100.79
2000	15.59	11.63	100.79
2001	15.59	11.63	100.79
2002	15.59	11.63	100.79
2003	15.59	11.63	100.79
2004	15.59	11.63	100.79
2005	15.59	11.63	100.79
2006	15.59	11.63	100.79
2007	15.59	11.63	100.79
2008	15.59	11.63	100.79
2009	15.59	11.63	100.79
2010	15.59	11.63	100.79
2011	15.59	11.63	100.79
2012	15.59	11.63	100.79
2013	15.59	11.63	100.79
2014	15.59	11.63	100.79
2015	15.59	11.63	100.79

The above rates are as ordered by the New Hampshire Public Utilities Commission in its Order Number 17,230, dated September 27, 1984, in DR 84-234.

Interconnection Agreement
Gregg Falls Hydroelectric Associates-PSNH
Dated July 27, 1984

PSNH INTERCONNECTION REPORT FOR
CUSTOMER GENERATION

GREGGS FALLS

SESD SITE NO. 018

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I. INTRODUCTION

A study has been performed to determine the impact of this proposed facility on the PSNH system. All technical analysis was based on the equipment listed under Section II, and the facility arrangement illustrated on partial one-line diagram SK-PAM-018-0. Where actual site-specific data was not readily available, estimated or "typical" values were utilized in any required calculations. Any deviation from the listed equipment or the illustrated configuration may have significant safety and/or technical ramifications. Consequently, if changes are anticipated now or in the future, PSNH should be informed immediately so that the requirements and recommendations contained within the report may be revised where necessary. This procedure will ensure that the Developer is informed of PSNH requirements in a timely fashion and should eliminate the delays and expense which could otherwise be experienced by the Developer.

II. DESCRIPTION OF MAJOR COMPONENTS

A. Description Of Facilities

Greggs Falls is a two-machine 3.5 MW hydroelectric facility located in Goffstown, N.H. The site utilizes water taken from the Piscataquog River and impounded behind Greggs Falls Dam (NHWRB No. 93.01). All generation will be delivered to PSNH 34.5 kV line 328. Station service power will be taken from 12.47 kV line 27W2.

The salient electrical features of this facility are illustrated on Partial One-Line Diagram SK-PAM-018-0, section VII.A of this report.

B. Mechanical Components

1. Turbines:

- No. 1 - Sorumsand, vertical Francis, 2195 KW, 277 RPM
- No. 2 - Sorumsand, vertical Francis, 1400 KW, 360 RPM

2. Actuators:

- No. 1 - Sorumsand, Hydraulic
- No. 2 - Sorumsand, Hydraulic

C. Electrical Components

To the degree that the information is available and applicable, information in this section should include the following:

1. Generators:

- G1 - National Industri, synchronous, 276.9 RPM, 4160 V, .9 PF, 2.41 MVA, $X''_d = .241$, $X'_d = .241$, $X_d = .85$

II.C.1 (Cont'd)

G2 - National Industri, synchronous, 360 RPM, 4160 V, .9 PF, 1.46 MVA, $X''_d = .286$, $X'_d = .29$, $X_d = .91$

2. Exciter/voltage regulators:

G1 - Basler SSE

G2 - Basler SSE

3. Generator Circuit Breakers - Brown Boveri type 5HK250 air circuit breakers, 5 kV class, 1200 amp, 250 MVA IC.
4. Generator Stepup Transformer - 3.75 MVA, 34.5 kV - 4.16 kV, 6% impedance, reactance grounded wye-delta, 200 kV BIL
5. Neutral Grounding Reactor - 36 OHMS, reactance at 60 Hz, 10 amps continuous rating, 250 Amps 10 second rating
6. High Side Interrupter - McGraw Edison VSO recloser, 3-phase, 560 A, 12000 A IC, Electronic control

III. PSNH REQUIREMENTS - GENERAL

A. Safety Considerations

1. The connection of the facility to the PSNH system must not compromise the safety of PSNH's customers, personnel, or the owner's personnel.
2. The generating facility must not have the capability of energizing a de-energized PSNH circuit.
3. An emergency shutdown switch with facility status indicator lights, and a disconnecting device with a visible open shall be made available for unrestricted use by PSNH personnel. The operation of the switch shall cause all of the facility's generation to be removed from service, and shall block all automatic startup of generation until the switch is reset. The status lights, mounted with the shutdown switch, shall be located outdoors at a position acceptable to PSNH operating division personnel. A red light shall indicate that the facility has generation connected to the PSNH system. A green light shall indicate that all generation is disconnected from the PSNH system. The lights shall be driven directly from auxiliary switches located on the facility's 34.5 kV interrupting device (52L). The disconnecting device with visible open shall be located between the PSNH system and the facility's generation.
4. The settings for all protective relays required by PSNH will be developed by PSNH.

5. A crew of PSNH relay technicians will apply settings to and verify the proper functioning of those protective systems required by PSNH. This work will be performed at the Developer's expense.
6. The generating facility has full responsibility for ensuring that the protective system and the associated devices are maintained in reliable operating condition. PSNH reserves the right to inspect and test all protective equipment at the interconnecting point whenever it is considered necessary. This inspection may include tripping of the breakers.
7. The short circuit interrupting device(s) must have sufficient interrupting capacity for all faults that might exist. The PSNH system impedance at the facility will be supplied on request.
8. All shunt-tripped short circuit interrupting devices applied to generators must be equipped with reliable power sources. A D.C. battery with associated charging facilities is considered a reliable source.
9. All synchronous generator facilities must be equipped with battery-tripped circuit breakers.
10. Any protection scheme utilizing AC control power must be designed in a fail-safe mode. That is, all protective components must utilize contacts which are closed during normal operating conditions, but which open during abnormal conditions or when control power is lost to de-energize the generator contactor coil. These schemes may be utilized only with non-latching contactors and may not be used with synchronous generators.
11. A complete set of AC and DC elementary diagrams showing the implementation of all systems required by PSNH must be supplied for PSNH review. These drawings should be supplied as soon as possible so that any non-conforming items may be corrected by the Developer without impacting the scheduled completion date of the facility.
12. All voltage transformers driving PSNH-required protection systems must be rated by the manufacturer as to accuracy class, and must be capable of driving their connected burdens with an error not exceeding 1.2 percent.
13. All current transformers driving PSNH-required protection systems must be rated by the manufacturer as to accuracy class and must be capable of driving their connected burdens with an error not exceeding 10 percent.
14. All PSNH-required protective relays, and any other relays which PSNH will be requested to test, must be equipped with test facilities which allow secondary quantity injection and output contact isolation.

15. It is not the policy of PSNH to maintain a stock of protective relays for resale to facility developers. Since many protective devices have delivery times of several months, Developers are strongly advised to order them as soon as possible after PSNH type-approval is received.
16. Protection of the generating facility equipment for problems and/or disturbances which might occur internal or external to the facility is the responsibility of the Developer.
17. No operation of the facility's generation is allowed until all requirements in Sections III and IV of this report have been met, and all systems required therein, are in place, calibrated, and, if applicable, proven functional. This requirement may be waived by PSNH for a given system if generation is required to demonstrate the proper functioning of that system.

B. Service Quality Considerations

1. The connection of the facility to the PSNH system must not reduce the quality of service currently existing on the PSNH system. Voltage fluctuations, flicker, and excessive voltage and current harmonic content are among the service quality considerations. Harmonic limitations should conform to the latest IEEE guidelines and/or ANSI standards.
2. In general, induction generators must be accelerated to "synchronous" speed prior to connection to the PSNH system to reduce the magnitude and duration of accelerating current and resulting voltage drop to PSNH customers to acceptable levels.
3. In general, synchronous generators may not use the "pull-in" method of synchronizing due to excessive voltage drops to PSNH customers.
4. Power factor correction capacitors may be required for some facilities either at the time of initial installation, or, at some later date. The installation will normally be done by the Developer at his expense.
5. Certain facilities having installed capacity similar in magnitude to connected circuit load may require that control modifications be made to tap changers in the electrical vicinity. Should they be necessary, the modification will be made at the Developers' expense.
6. Automatic reclosing of the PSNH circuit after a tripping operation may occur after an appropriate time delay. If voltage blocking of automatic reclosing is required, it will be added at the Developers' expense.

C. Metering Considerations

1. Except for metering and protection/control voltage sensing and generator and/or capacitor contactor supply voltage, no unmetred AC power shall be taken from the PSNH system.

D. System Operation

1. The maximum voltage allowed by the New Hampshire Public Utilities Commission (NHPUC) on those lines which directly feed retail customers is 104%. The generators must be operated at excitation levels which do not violate that limit.
2. Any generator trips resulting from protective relay operations should be promptly reported to the PSNH load dispatcher. The data reported should include time of operation, device designation, target nomenclature, approximate watts and vars at the time of the trip, and any other information pertinent to the operation.
3. Any alarms or malfunctions of the PSNH-required protective systems must be promptly reported to the PSNH load dispatcher.

IV. PSNH REQUIREMENTS - SPECIFIC

A. System Configuration and Protection

1. The facility must be arranged and equipped as per partial one line diagram SK-PAM-018-0.
2. The following protective functions must be supplied and connected to automatically trip as indicated. These devices must be utility grade as approved by PSNH.

<u>Protective Device</u>	<u>Minimum Tripping Function</u>
1. Time-Overfrequency (81R)	52G1, 52G2
2. Time-Underfrequency (81L)	52G1, 52G2
3. Time-Overvoltage (59)	52G1, 52G2
4. Time-Undervoltage (27)	52G1, 52G2
5. Ground Time-Overcurrent (51N)	52L
6. Voltage Restrained Time-Overcurrent (51V)	Associated 52G
7. Reverse Power (32)	Associated 52G

3. The facility generator stepup transformer (GSU) must have a reactance grounded wye (HV) - Delta (LV) winding configuration.

4. The facility must be equipped with a PSNH-approved fully rated high-side three phase interrupting device capable of interrupting all fault currents supplied either by PSNH or the facility itself. The device must be equipped with trip components and accessories as specified and/or approved by PSNH.
5. The GSU must be equipped with a 34.5 kV neutral grounding reactor with the following specifications:
 - 60 Hz Reactance - 36 OHMS
 - Continuous Rating - 10 Amps
 - 10 Second Rating - 250 Amps
6. The facility must be equipped with three disconnecting links on the line side of the 52L device to act as a visible open point between the facility and the PSNH system.
7. Synchronism check permissive must be added at Greggs S/S on OCB TBL7.
8. The opening of Device 52L must always cause the opening of Devices 52G1 and 52G2.

B. System Metering

1. The facility must be equipped with the metering system as shown on partial one line diagram SK-PAM-018-0.
2. The metering must consist of the following components:
 - a. 2 - G.E. Type JKM-3, 600/5 amp. current transformers
 - b. 2 - G.E. Type JVM-3, 4200/120 volt voltage transformers with 2 line side fuses
 - c. 1 - SC type JEM-2 multifunction solid state time-of-day meter with transformer loss compensation option
 - d. 1 - Anchor Cat. #TSS-13-2-PSHO meter socket
 - e. 1 - Meter Devices Cat. #A1898-C, 10 pole test switch

Optional Equipment:

- f. 1 - Mass memory and extended communications option for Item C., above
- g. 1 - Teleprinter

- Notes:
1. There is a 10-14 week delivery lead time required for the metering equipment.
 2. Secondary metered at 4160 volts.
 3. The meter will be compensated for transformer losses (GSU) by use of an integral transformer loss compensation routine.

4. Developer must provide a means to accomplish the following:

- a. Report on a daily basis, twenty-four hours of hourly generation. Values are to be reported in tenths of a MWH. Hourly generation is the gross or net value as agreed upon in the contract. The NHPUC also requires hourly generation reports, but on a monthly basis.

Optional items f and g, above, will allow a printed record of hourly generation to be produced and will allow the generation report requirements to be fulfilled. The option is left to the Developer to implement, however, as he may have other means to comply with this requirement.

- b. Report a meter reading on a weekly basis to correct any discrepancies in the hourly totals.
- c. Provide on a monthly basis, a printed log of date, time and hourly generation for each day of the month. Metering required for watthour records will be either magnetic tape or electronic recorders as specified by the New England Power Pool (NEPOOL).

PSNH will install at its expense a pulse recorder for generation to satisfy NEPOOL requirements. If the standard pulse output of the JEM-2 is not being used by the Developer, PSNH will use this output. If the Developer is using the pulse output, PSNH will provide an isolation relay that will allow simultaneous non-interfering usage of the pulse output.

- d. The Station Operator is to report expected output for the following day, outage and return times, and significant limitations to the PSNH Dispatcher.
 - e. The dates planned for annual inspection along with any flexibility in the planned period should be available to PSNH in accordance with NEPEX Operating Procedure #5.
 - f. Using monthly meter readings, submit a calculated bill for generation supplied to PSNH.
5. Developer to physically mount the metering equipment and install necessary conduit.
 6. PSNH to wire meter secondaries and to perform tests.

C. Primary Interconnection

The following work must be performed to interface this facility with the PSNH system.

1. The final tap between PSNH line 328 and the solid cutouts on the PSNH side of the VSO recloser must be completed.
2. The VSO recloser and associated accessories must be functionally checked. It should be noted that the recloser and associated hardware will be supplied and installed by others.
3. The VSO recloser (device 52L) will be maintained by PSNH at the Developer's expense on a bi-yearly schedule.

V. PSNH PRICE ESTIMATES

The following estimates for labor, materials, and overheads are supplied as an aid to the Developer for financial planning purposes. Should the Developer elect to have PSNH perform any of the work described in the estimates, he will ultimately be billed for the full actual cost of any work performed.

Authorization for PSNH to perform any of the work or supply any of the equipment described below must be forwarded to the Supplemental Energy Sources Department along with a minimum payment covering 50% of the estimated labor and materials cost. PSNH will neither perform work nor order materials until this requirement has been met.

A. System Protection

1. Greggs Hydro

a. Materials \$ 0.00

PSNH is supplying no system protection equipment.

b. Labor, Overheads, and Misc. \$4,400.00

Applying settings to and verifying the correct operation of the protection and control equipment required by PSNH. Apply settings to and verify the correct operation of 40(2), 46(2), 64G(2), 87(3), and 64B devices included by Developer but not required by PSNH.

2. Greggs S/S (PSNH)

a. Materials \$1,100.00

1 - synchronism check relay (25)

b. Labor, Overheads, and Misc. \$2,300.00

Engineering, drafting installation and testing of component listed above. See report section IV.A.7 for application information.

SUBTOTAL \$7,800.00

B. System Metering

1. Materials \$ 0.00

PSNH is supplying no metering materials

2. Labor, overheads, misc. \$ 500.00

Wire metering secondaries and perform tests

SUBTOTAL \$ 500.00

C. Primary Interconnection

1. Materials, Labor, Overheads, Misc. \$2,000.00

Engineering, installation, testing, and materials associated with the work described in report Section IV.C

2. The BI-Annual maintenance on device 52L will be performed by PSNH at an estimated labor cost and outage duration of \$800 and 2 days, respectively. The cost of any necessary replacement parts will be in addition to this figure and will also be the responsibility of the Developer. Maintenance costs are not included in this section.

SUBTOTAL \$2,000.00

GRAND TOTAL (A + B + C) \$10,300.00

VI. INTERCONNECTION EQUIPMENT OWNERSHIP, OPERATION, AND MAINTENANCE

A. Delivery Point

For the purpose of establishing ownership, operation, and maintenance responsibilities, the location of facility energy delivery to PSNH (the "Delivery Point") must be defined. At this facility, the delivery point is located at the PSNH side of the isolating cutouts located on the PSNH side of device 52L.

B. Description of Responsibilities

The Developer will normally be responsible for the ownership, maintenance, and operation of all equipment on the facility side of the delivery point. However, special circumstances may require PSNH personnel to operate the emergency shutdown switch and visible opening device. This would likely occur only during situations where facility personnel were not available or during planned maintenance of device 52L.

Power $I I_i^2 = 746 \text{ W}$